STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	1	53

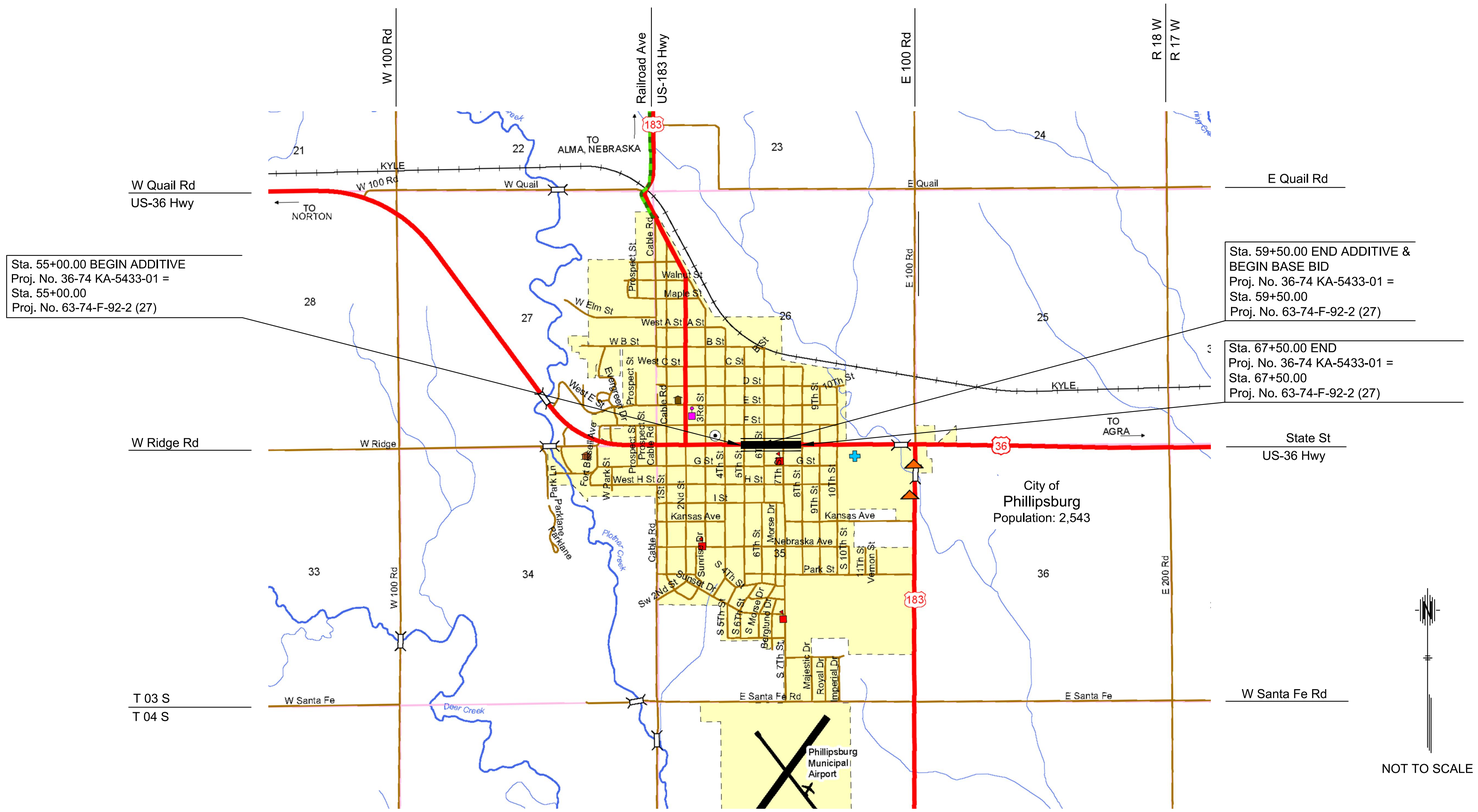
F.A. No. ACNHP-A543(301)

GRADING
CONCRETE PAVEMENT
PAVEMENT MARKING
SEEDING

STATE OF KANSAS
DEPARTMENT OF TRANSPORTATION
PLAN AND PROFILE OF PROPOSED
36-74 KA-5433-01

FEDERAL AID PROJECT
PHILLIPS COUNTY
CITY OF PHILLIPSBURG

INDEX OF SHEETS



NOT TO SCALE

DESIGN DESIGNATION

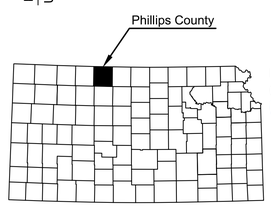
AADT (2018)	7,080
T	9.9%
V	35 mph
C of A	Partial
Clear Zone	16 ft.

PROJECT IS LOCATED IN SECTIONS 26 & 35
TOWNSHIP 03 SOUTH, RANGE 18 WEST

CONVENTIONAL SIGNS

COUNTY LINE	CENTER LINE OF PROJECT
CITY LIMITS	TERRACE
STATE OR NATIONAL LINE	CULVERTS
TOWNSHIP, SECTION or GRANT LINE	DROP INLET & STORM SEWER
PROPERTY LINE	ACCESS CONTROL
HIGHWAY FENCE	POWER POLE
EXISTING FENCE	TELEPHONE POLE
GUARDRAIL	MARSH
CONSTRUCTION LIMITS	HEDGE
RIGHT OF WAY LINE	TREES
TRAVELED WAY	PROFILE ELEVATION
RAILROADS	STREAM or CREEK

GROSS LENGTH OF PROJECT	1,250.00	FT.	(Includes Equations)
EXCEPTIONS	0.00	FT.	
ADDITIONS	NONE	FT.	
NET LENGTH OF PROJECT	1,250.00	FT.	0.237 MILES
NET LENGTH OF BRIDGES	0.00	FT.	0.000 MILES
NET LENGTH OF ROAD	1,250.00	FT.	0.237 MILES



KEY TO COUNTIES

Plans Prepared by:
(BG #20-1374M)
BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

RECOM. FOR APPROVAL-DATE
3-14-2022
LOCAL PUBLIC OFFICIAL

The following seal is applicable to to the following sheets:
17-21

The following seal is applicable to to the following sheets:
1-16, 22-53

NOTE: TRAFFIC SHALL BE CARRIED THRU CONSTRUCTION

Approved Mar 15,2022

State Transportation Engineer

By: Dawn M Hueske
Assistant Chief, Bureau of Local Projects

KANSAS DEPARTMENT OF TRANSPORTATION

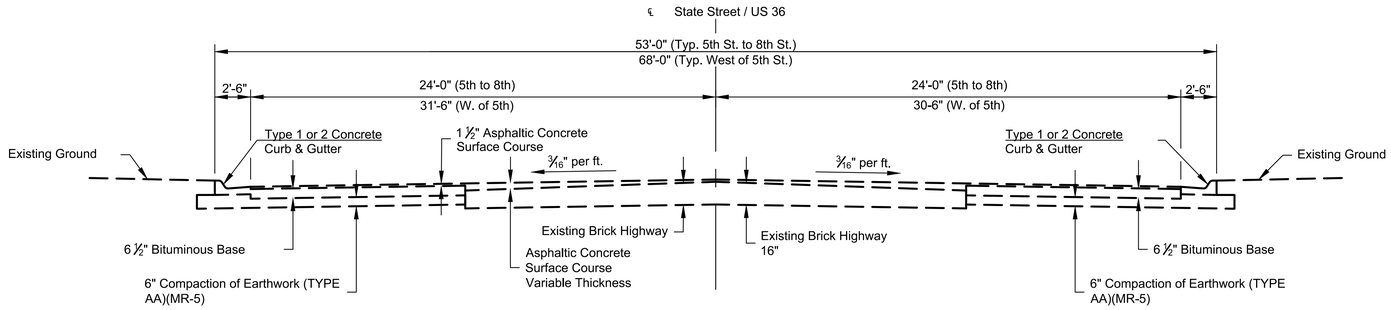
BY	DATE
BG Consultants, Inc.	2020
BG Consultants, Inc.	2020
KDOT - Local Projects	2020

SURVEYED
PLOTTED
INKED
DESIGNED
SQUAD

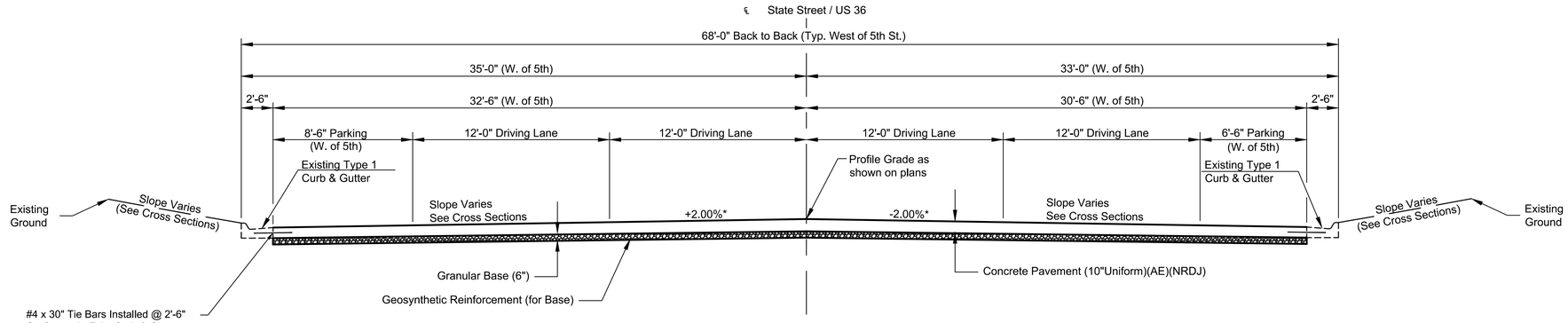
BG Project #20-1374M

20-1374M				
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	2	52

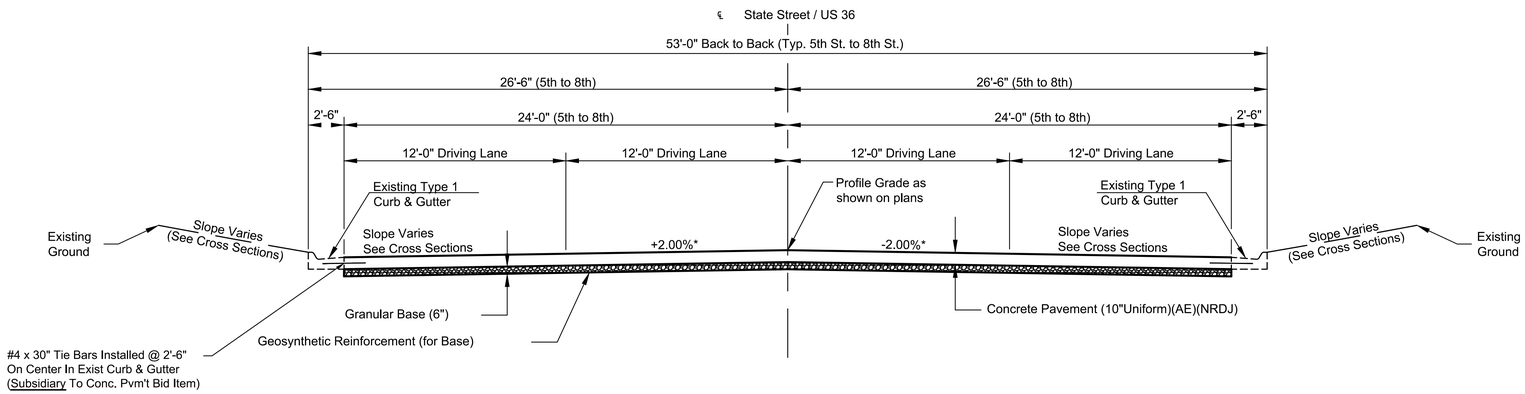
BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS



Existing Typical Section
(FOR INFORMATION ONLY)
(Not to Scale)



TYPICAL SECTION - STATE STREET (US-36)
(Not to Scale)
Sta. 55+00 to Sta. 56+02.57 (W. OF 5TH)



TYPICAL SECTION - STATE STREET (US-36)
(Not to Scale)
Sta. 56+02.57 to Sta. 67+50 (5TH TO 8TH)

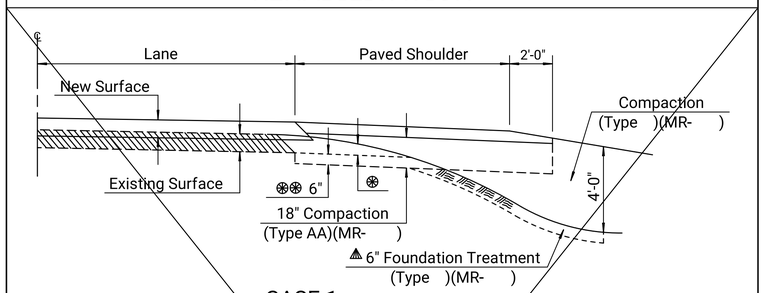
* See Profile for locations of slope transitions to/from existing cross slope. See cross sections for additional information.

BG Project #20-1374M

CITY OF PHILLIPSBURG, KANSAS
GENERAL NOTES
&
TYPICAL SECTIONS

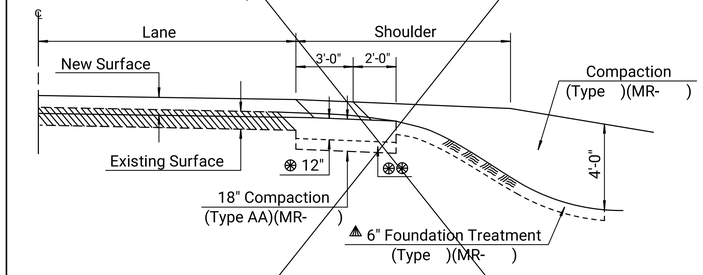
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	3	52

REHABILITATION



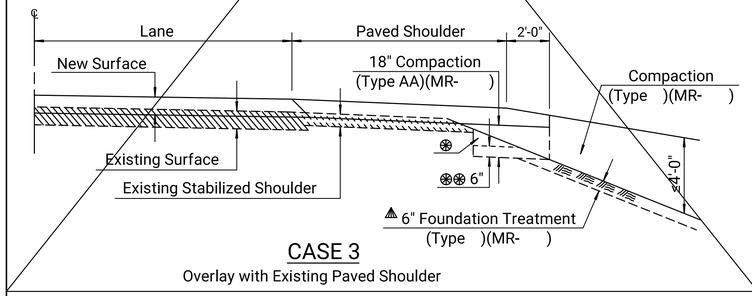
CASE 1

Overlay with Paved Shoulder



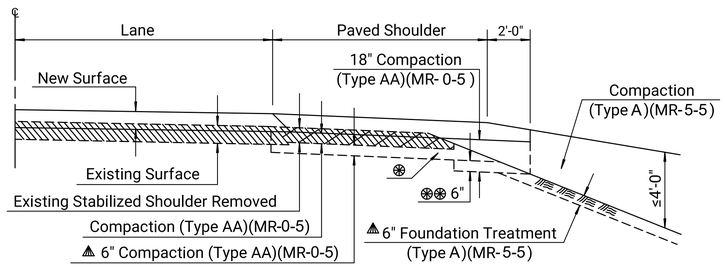
CASE 2

Overlay with Composite Shoulder



CASE 3

Overlay with Existing Paved Shoulder



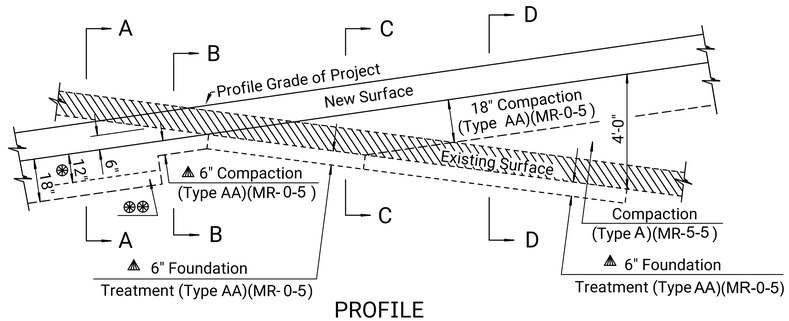
CASE 4

Overlay with Shoulder Replacement

⊛ Excavation thru Cuts not Subgraded
⊛⊛ The lower 6" of Compaction is subsidiary.
⚠ Compaction of this material shall be subsidiary.

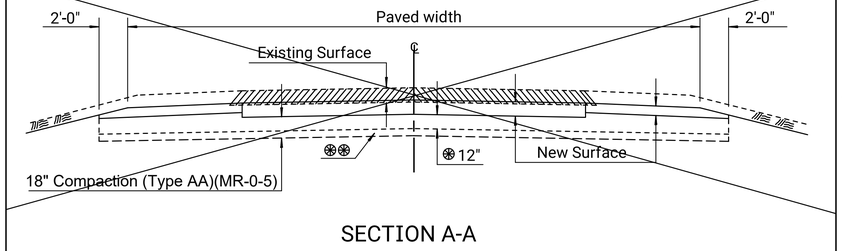
Note: These are 4 general cases. Specific compaction requirements are determined on a project-by-project basis.

RECONSTRUCTION

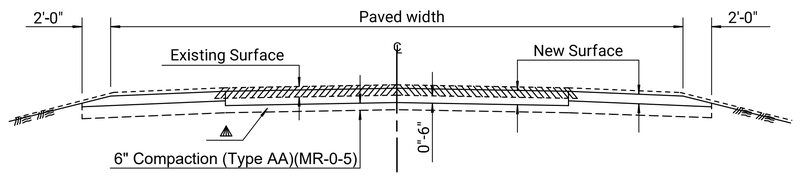


PROFILE

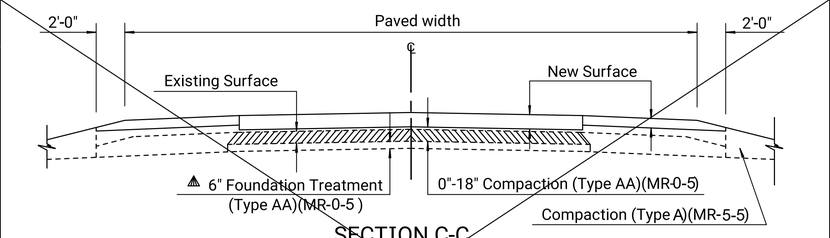
⊛ Excavation thru Cuts not Subgraded
⊛⊛ The lower 6" of Compaction is subsidiary.
⚠ Compaction of this material shall be subsidiary.



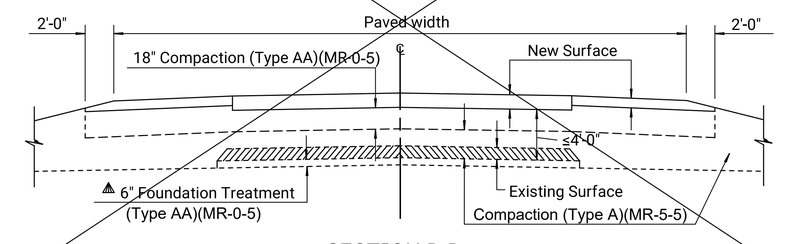
SECTION A-A



SECTION B-B

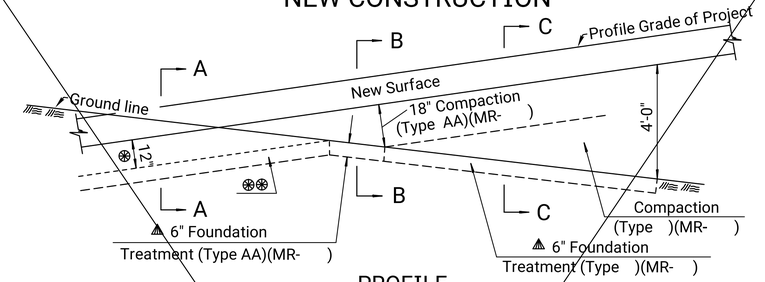


SECTION C-C



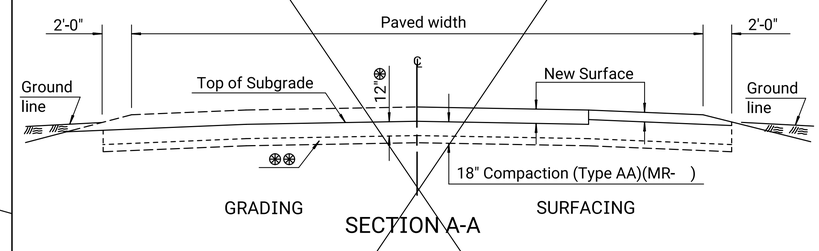
SECTION D-D

NEW CONSTRUCTION

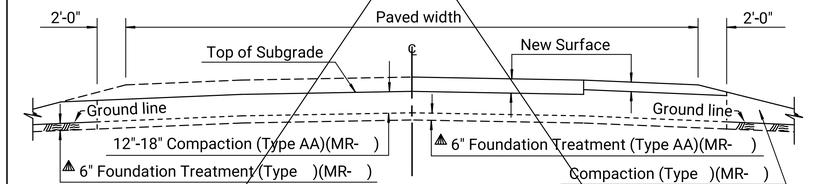


PROFILE

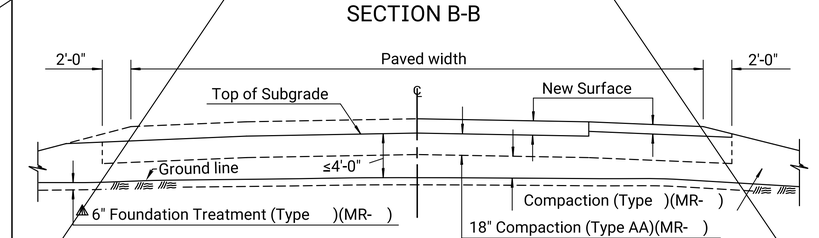
⊛ Excavation thru Cuts not Subgraded
⊛⊛ The lower 6" of Compaction is subsidiary.
⚠ Compaction of this material shall be subsidiary.



SECTION A-A



SECTION B-B



SECTION C-C

General Note

~~For materials designated to be subgraded,compaction of soils, including shales, designated for backfill refer to Standard Drawing RD605A for details.~~

Unless otherwise noted on the Plans, compact all embankment, including side roads and entrances.

NO.	DATE	REVISIONS	BY	APP'D
5	10-17-1 1	Revised General Note	S.W.K.	J.O.B.
4	1-05-1 0	Added additional subsidiary comp.	S.W.K.	J.O.B.
3	2-16-05	Redrawn, Rev. Recon. Sec. C-C & D-D	S.W.K.	J.O.B.
2	5-29-98	Revised Reconstruction Section B-B	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

FOUNDATION TREATMENT & COMPACTION OF EARTHWORK

RD605

FHWA APPROVAL 12-5-1 1		APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 03-28-2018

KDOT Graphics Certified

Plotted :28-MAR-2018 13:46
Drawn By : jacob.lawhorn
File : working_rd605.dgn

20-1374M

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	4	52

GENERAL NOTES

THE GEOLOGICAL INFORMATION SHOWN ON THESE PLANS IS FROM STUDIES MADE IN THE FIELD AND REPRESENTS THE BEST INFORMATION AVAILABLE TO THE ENGINEER.

EXCAVATION SHOWN TO BE WASTED SHALL BE WASTED ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO THE SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED.

ALL TREES, HEDGE ROWS, SHELTERBELTS, AND WOODY SHRUBS NOT SHOWN TO BE REMOVED AND LOCATED BETWEEN THE CONSTRUCTION LIMITS AND THE RIGHT-OF-WAY LINE OR EASEMENT LINE SHALL BE SPARED UNLESS DIRECTED BY THE ENGINEER TO BE REMOVED.

ALL ASPHALT AND CONCRETE TO BE REMOVED SHALL BE NEATLY SAW CUT. SAW CUTS SHALL BE FULL DEPTH AND SHALL BE SUBSIDIARY TO RELATED BID ITEMS.

ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIALS EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS DEPARTMENT AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS.

ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO MAKE CONNECTIONS TO EXISTING PIPE OR EXISTING SMALL STRUCTURES SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF PIPE INSTALLATION.

THE CONTRACTOR SHALL NOTIFY ALL LANDOWNERS IN WRITING AT LEAST TWO (2) WEEKS PRIOR TO ANY CONSTRUCTION ACTIVITIES WHICH WOULD TAKE PLACE ADJACENT TO THEIR PROPERTY. INDIVIDUAL DETAILED NOTICES OF ACCESS RESTRICTIONS SHALL BE HAND DELIVERED 48 HOURS PRIOR TO RESTRICTIONS PUT IN PLACE.

PROJECT SURVEY CONTROL

Horizontal Datum: Bearings and Coordinates are assumed and local to project. Distances are measured on ground level.

Vert. Datum: NAVD88

Designation - W 159
PID KG0234
Elev. = 1951.72

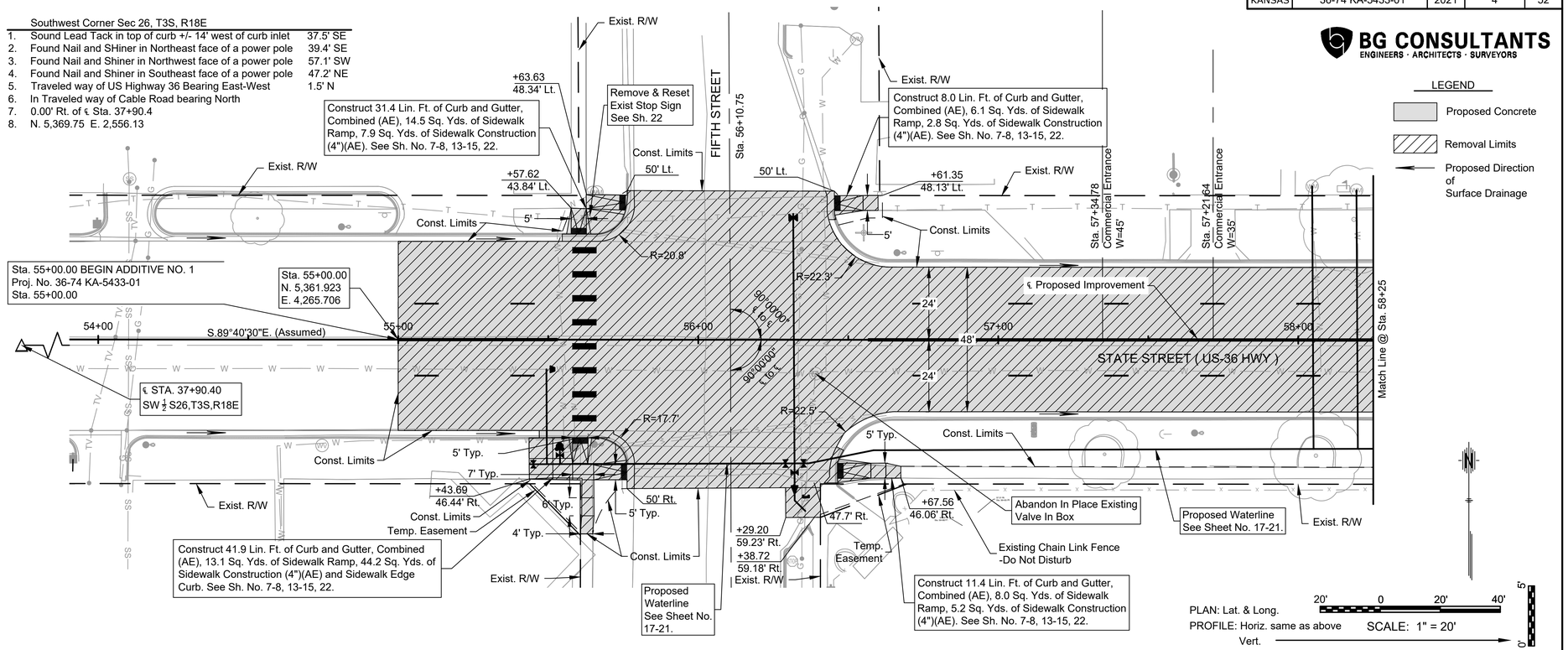
Description - As described by Coast and Geodetic Survey 1934: At Phillipsburg in the Phillipsburg County Court House, 1 Foot West of the Northeast Corner of building, directly under commissioners names, 4 Feet above level of sidewalk.
Note: This mark is set vertically on building.

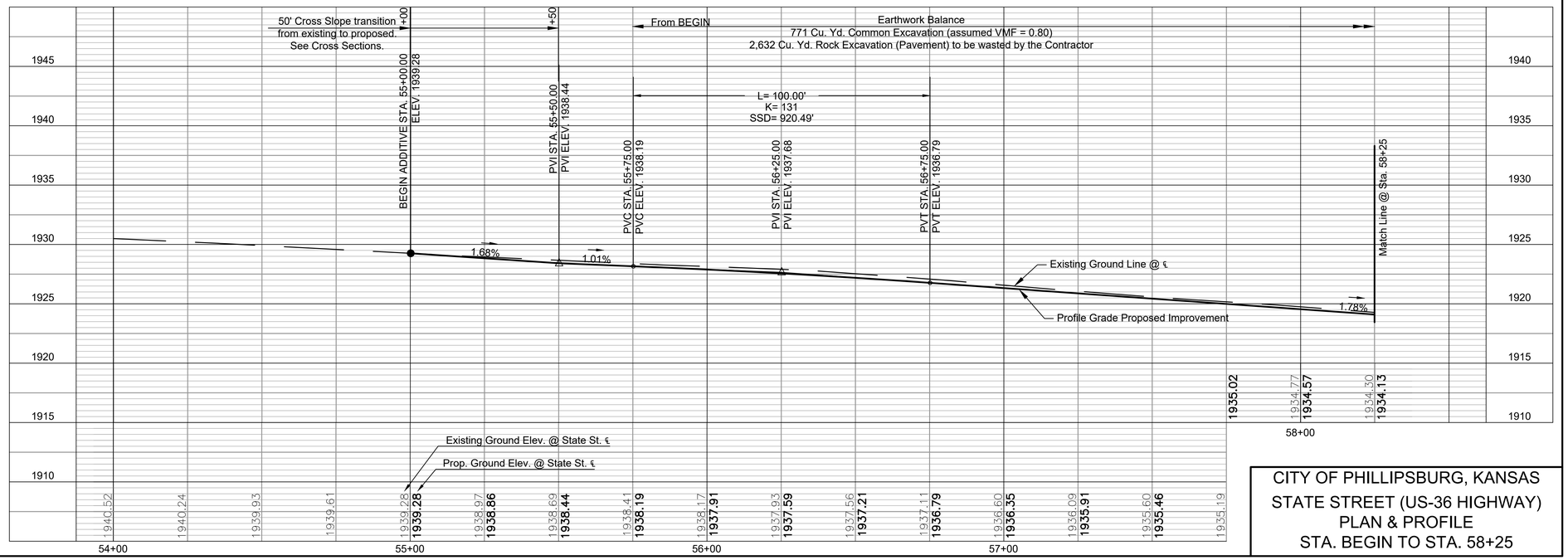
UTILITY OWNERS

- Water: City of Phillipsburg, KS
  Attn: Tim Driggs
  945 Second Street,
  Phillipsburg, KS 67661
  tdriggs@cityofphillipsburg.com
  (785) 543-5234
- Sewer: City of Phillipsburg, KS
  Attn: Tim Driggs
  945 Second Street,
  Phillipsburg, KS 67661
  tdriggs@cityofphillipsburg.com
  (785) 543-5234
- Natural Gas: Midwest Energy
  Attn: Brett Miles
  719 Third Street
  Phillipsburg, KS 67661
  bmiles@mwenergy.com
  (800) 222-3121
- Electricity: Prairie Land Electric Cooperative
  Attn: Dean Wiseman
  P.O. Box 360
  14935 US. Hwy 36
  Norton, KS 67654
  dwiseman@ple.coop
  (785) 577-3323
- Telephone: AT&T
  Attn: Rod Sullivant
  280 E. 5th Street
  Colby, KS
  rs4371@att.net
  (785) 462-2074
- Cable TV: Nex-Tech
  Attn: Terry Peterson
  Engineering Manager
  tpeterson@next-tech.com
  785-567-4281

Southwest Corner Sec 26, T3S, R18E

1.	Sound Lead Tack in top of curb +/- 14' west of curb inlet	37.5' SE
2.	Found Nail and SHiner in Northeast face of a power pole	39.4' SE
3.	Found Nail and Shiner in Northwest face of a power pole	57.1' SW
4.	Found Nail and Shiner in Southeast face of a power pole	47.2' NE
5.	Traveled way of US Highway 36 Bearing East-West	1.5' N
6.	In Traveled way of Cable Road bearing North	
7.	0.00' Rt. of ℄ Sta. 37+90.4	
8.	N. 5,369.75 E. 2,556.13	



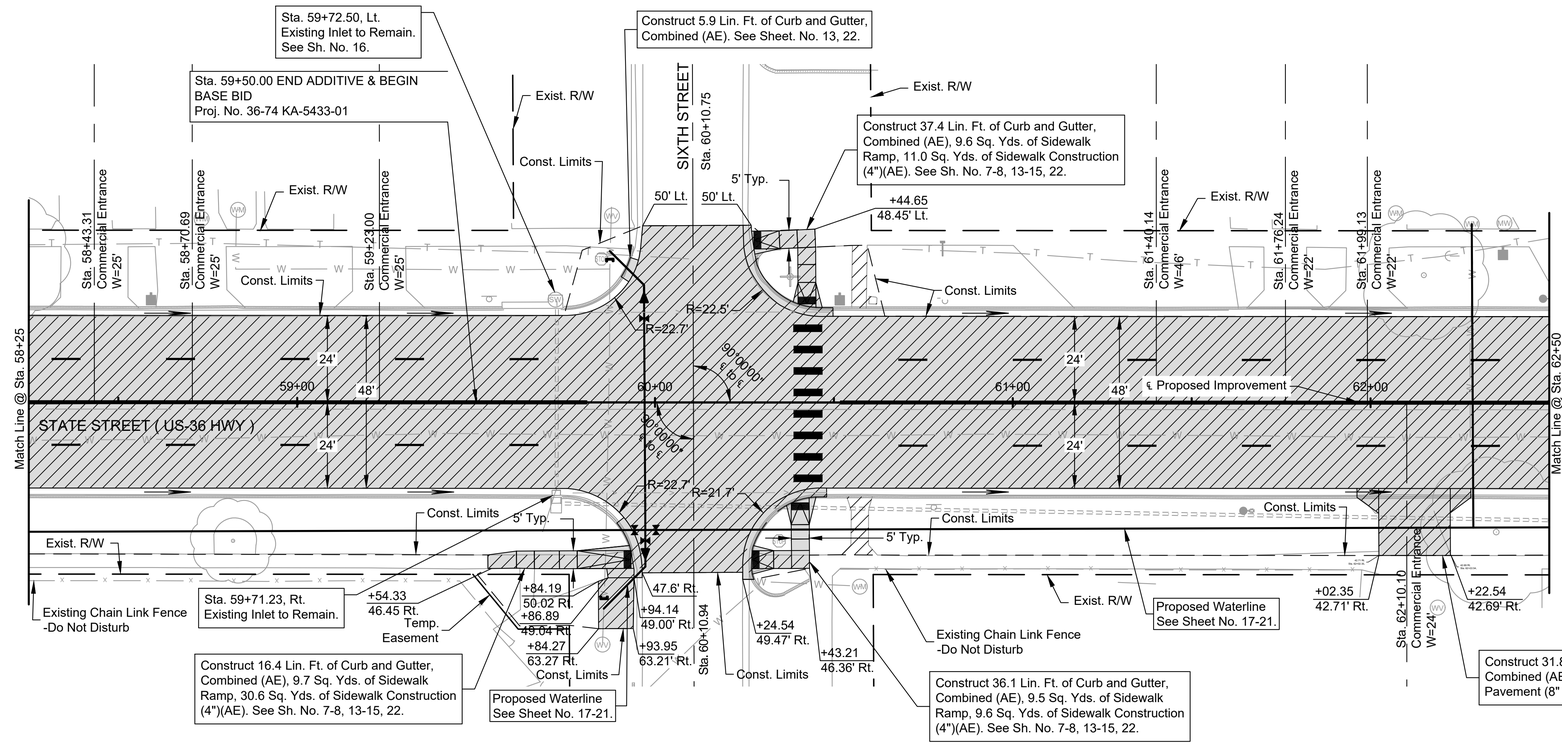


CITY OF PHILLIPSBURG, KANSAS
STATE STREET (US-36 HIGHWAY)
PLAN & PROFILE
STA. BEGIN TO STA. 58+25

BG Project #20-1374M

20-1374M					
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	36-74 KA-5433-01	2021	5	52	

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

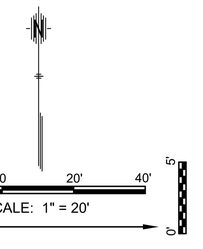


LEGEND

- Proposed Concrete
- Removal Limits
- Proposed Direction of Surface Drainage
- (1) Adjust Manhole to Finish Grade Elevation

South ¼ Corner Sec 26, T3S, R18W

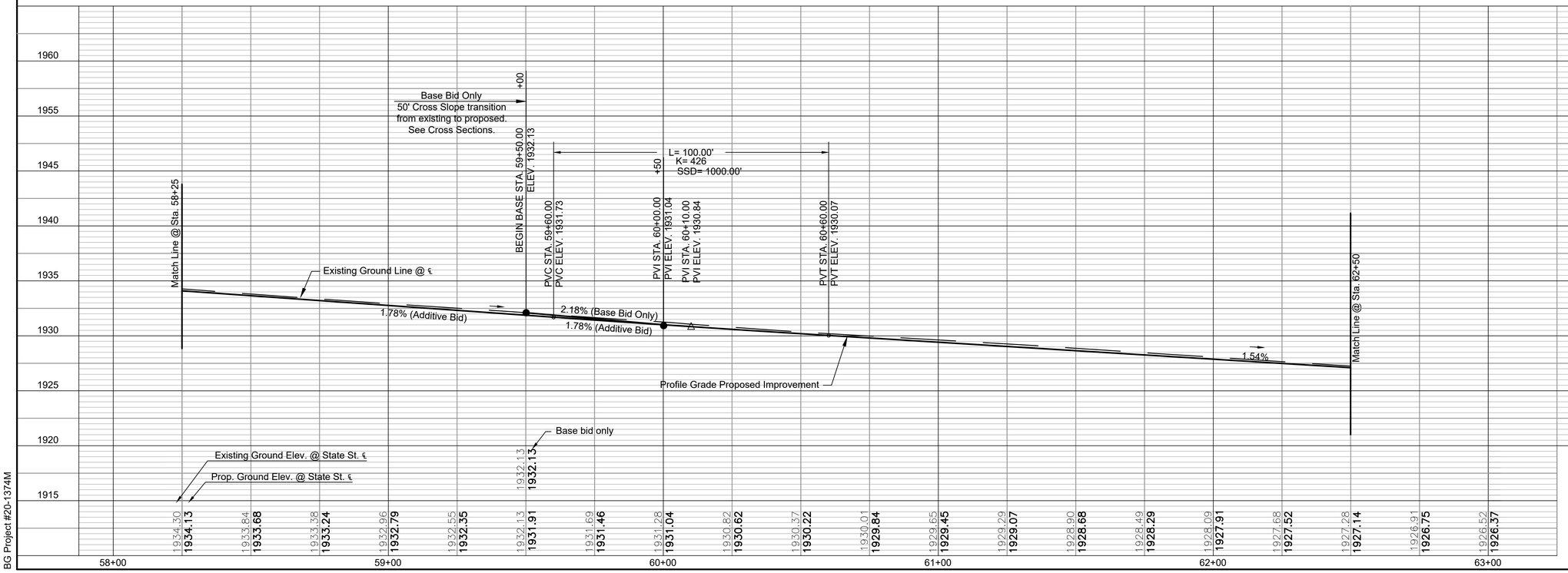
1.	Found Lead and Tack in top concrete curb	82.8' SW
2.	Found Plus Cut in Top Center of metal curb inlet	90.8' WSW
3.	Found Lead and Tack top middle of concrete curb return	38.2' NNW
4.	Found chiseled plus cut in top of concrete curb	41.2' NE
5.	Found chiseled plus cut in center of steel curb inlet	100.9' WNW
6.	Traveled way of East-West Road (U.S. Hwy-36)	2' N
7.	1.95' Rt. of ℄ Sta. 64+43.93	
8.	N. 5,354.614 E. 5,209.606	



PLAN: Lat. & Long.
PROFILE: Horiz. same as above
Vert.

SCALE: 1" = 20'

5
0



CITY OF PHILLIPSBURG, KANSAS
STATE STREET (US-36 HIGHWAY)
PLAN & PROFILE
STA. 58+25 TO STA. 62+50

BG Project #20-1374M

20-1374M

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	6	52

South ¼ Corner Sec 26, T3S, R18W

1.	Found Concrete Nail, flush with surface	
2.	Found Lead & Tack on top concrete curb	92.9' SW
3.	Found Chiseled "+" cut in top metal curb inlet	90.8' WSW
4.	Found Chiseled "+" cut in top concrete curb	41.25' NE
5.	Found Chiseled "+" cut in center steel inlet	100.85' WNW
6.	Traveled-way of East-West Highway 36	2' N
7.	1.96' Rt. of ℄ Sta. 64+43.9	
8.	N. 5,354.61 E. 5,209.61	

Northwest Sec 36, T3S, R18W

1.	Found chiseled plus cut in concrete curb return	41.9' SW
2.	Found Lead and Tack in top middle concrete curb return	42.2' SW
3.	Found PK nail in lead center of plus cut in concrete curb return	45.0' NW
4.	Found PK nail in concrete drive	63.7' SW
5.	Travelled way of East-West road (U.S. Hwy-36)	2' N
6.	0.00' Rt. of ℄ Sta. 91+01.02	
7.	N. 5,339.119 E. 7,866.652	

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

LEGEND
- Proposed Concrete
- Removal Limits
- Proposed Direction of Surface Drainage
- (1) Adjust Manhole to Finish Grade Elevation

Construct 34.0 Lin. Ft. of Curb and Gutter, Combined (AE), 13.9 Sq. Yds. of Sidewalk Ramp, 5.6 Sq. Yds. of Sidewalk Construction (4")(AE). See Sh. No. 7-8, 13-15, 22.

Remove & Reset Exist Stop Sign See Sh. 22

Sta. 63+46.99, Lt. Existing Inlet to Remain.

Install Detectable warning strip. See Sheet 15

Construct 11.3 Lin. Ft. of Curb and Gutter, Combined (AE), 8.5 Sq. Yds. of Sidewalk Ramp, 2.8 Sq. Yds. of Sidewalk Construction (4")(AE). See Sh. No. 7-8, 13-15, 22.

SEVENTH STREET — Sta. 64+10.27

EIGHTH STREET

STATE STREET (US-36 HWY)

Match Line @ Sta. 62+50

Sta. 62+76.79 Commercial Entrance W=38'

Sta. 66+04.23 Commercial Entrance W=39'

Const. Limits +55.85 42.47' Lt.

+68.83 49.00' Lt. 50' Lt.

+41.62 44.49' Lt. 50' Lt.

Exist. R/W

5' Typ.

R=22.5'

R=21.0'

90°00'00" ℄ to ℄

24'

48'

℄ Proposed Improvement

63+00 64+00 65+00 66+00 67+00

℄ STA. 91+01.02 NW Cor. S36,T3S,R18W

Sta. 67+50.00 END
Proj. No. 36-74 KA-5433-01
N: 5,354.833
E: 5,515.686

Construct 25.6 Lin. Ft. of Curb and Gutter, Combined (AE). See Sh. No. 7-8, 13-15, 22.

Construct 9.5 Lin. Ft. of Curb and Gutter, Combined (AE). See Sheet. No. 13, 22.

Proposed Waterline See Sheet No. 17-21.

Sta. 63+56.38, Rt. Existing Inlet to Remain.

℄ STA. 64+43.90, 1.96' Rt. S ¼ Cor. S26,T3S,R18W

Abandon In Place Existing Valve In Box

Sta. 64+96.40 Commercial Entrance W=64'

Sta. 65+64.33 Commercial Entrance W=61'

Sta. 66+10.04 Commercial Entrance W=25'

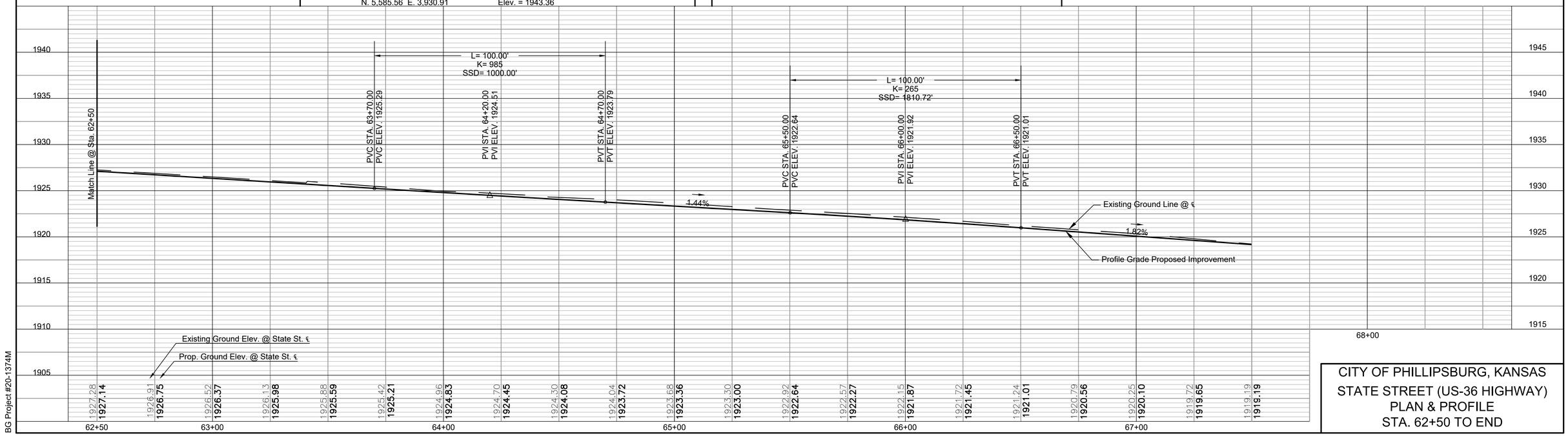
Sta. 66+91.15 Commercial Entrance W=60'

Sta. 67+53.08, Rt. Remove and Reconstruct Inlet Top See Sh. No. 16.

PLAN: Lat. & Long.
PROFILE: Horiz. same as above
Vert.
SCALE: 1" = 20'
20' 0 20' 40'
5'
0'

BM #101 - Set " + " cut on the top of concrete curb approximately 30' East
USC&GS Benchmark "W 159".
221.7' Lt. of ℄ Sta. 51+63.9
N. 5,585.56 E. 3,930.91 Elev. = 1943.36

BM #54 - Found N.W. bolt on top of Fire Hydrant
36.08 Rt. of ℄ Sta. 63+77.9
N. 5,320.87 E. 5,143.41 Elev. = 1927.86



CITY OF PHILLIPSBURG, KANSAS
STATE STREET (US-36 HIGHWAY)
PLAN & PROFILE
STA. 62+50 TO END

BG Project #20-1374M

20-1374M					
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	36-74 KA-5433-01	2021	7	52	

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

GENERAL NOTES

All Top of Curb elevations on this sheet are for "Curb and Gutter - Type I". The Contractor shall be responsible for adjusting the height of the curb at locations where "Curb and Gutter - Type II" or other types of Curb and Gutter are to be constructed.

Provide a 4 ft. transition from full curb height to no curb height at locations where the end of the curb and gutter does not connect to an existing curb or a structure.

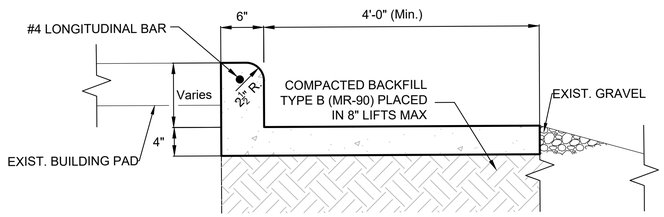
⌀= Level area in the sidewalk/sidewalk ramp alignment which shall be sloped to maintain positive drainage, but in no case shall the slope exceed 2% measured in any direction. See the access ramp construction details for more information.

Where new concrete sidewalk abuts existing sidewalks, the tie-in location shall be flush. No vertical discontinuities will be allowed.

Field verify that a counter slope of 5% or flatter is used at the base of curb ramps (per RD725) and that indicated drainage patterns are maintained.

LEGEND

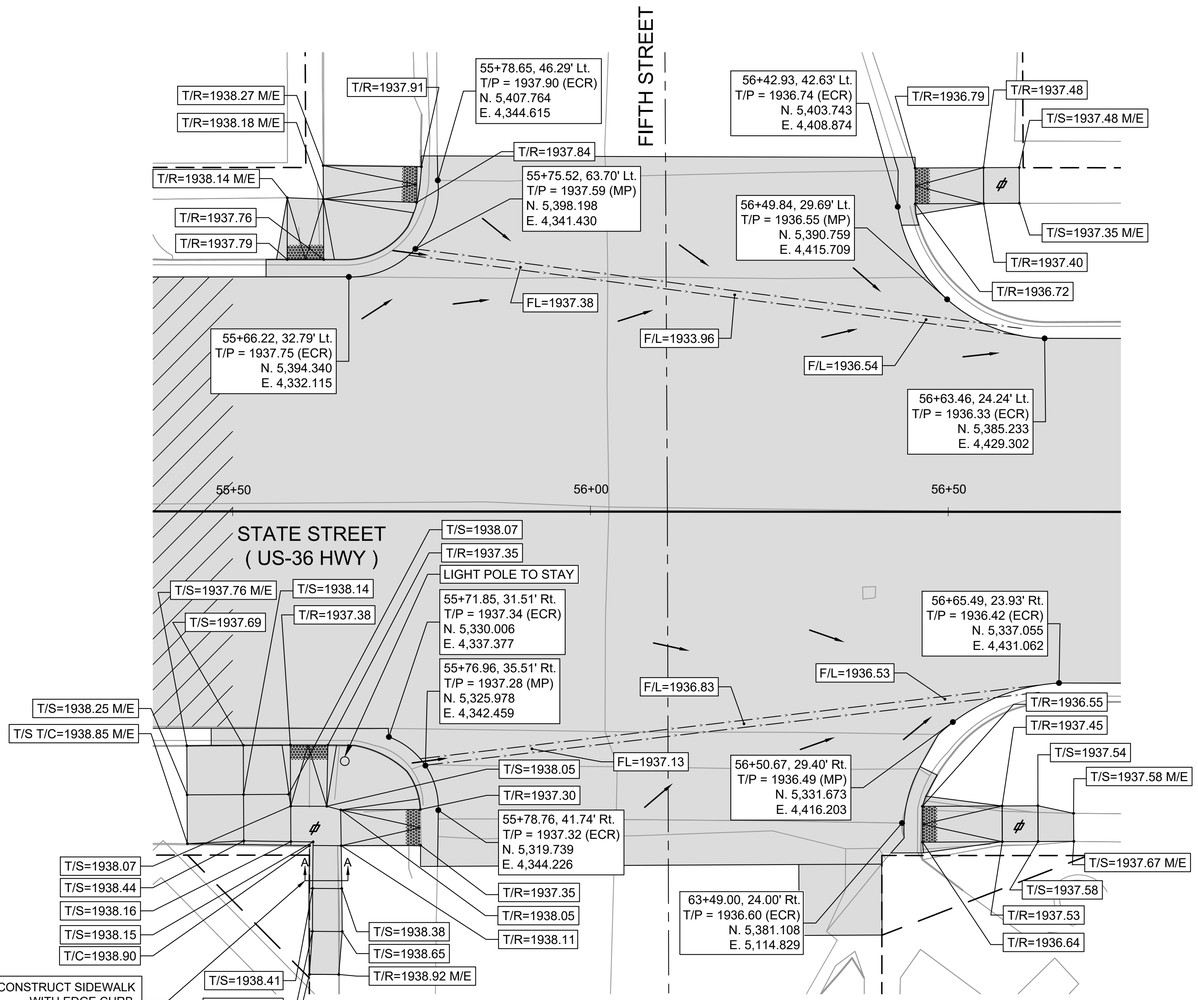
→	Proposed Direction of Surface Drainage
10'	Proposed Contraction Joint & Joint Length
ECR	End of Curb Return
QP	Quarter-point of Curb Return
MP	Mid-point of Curb Return
T/C	Top of Curb (Type CG1 Curb and Gutter)
T/P	Top of Pavement
T/R	Top of Ramp
⌀	Landing
T/S	Top of Sidewalk
T/W	Top of Wall
M/E	Match Existing
	Proposed Concrete



SECTION A-A

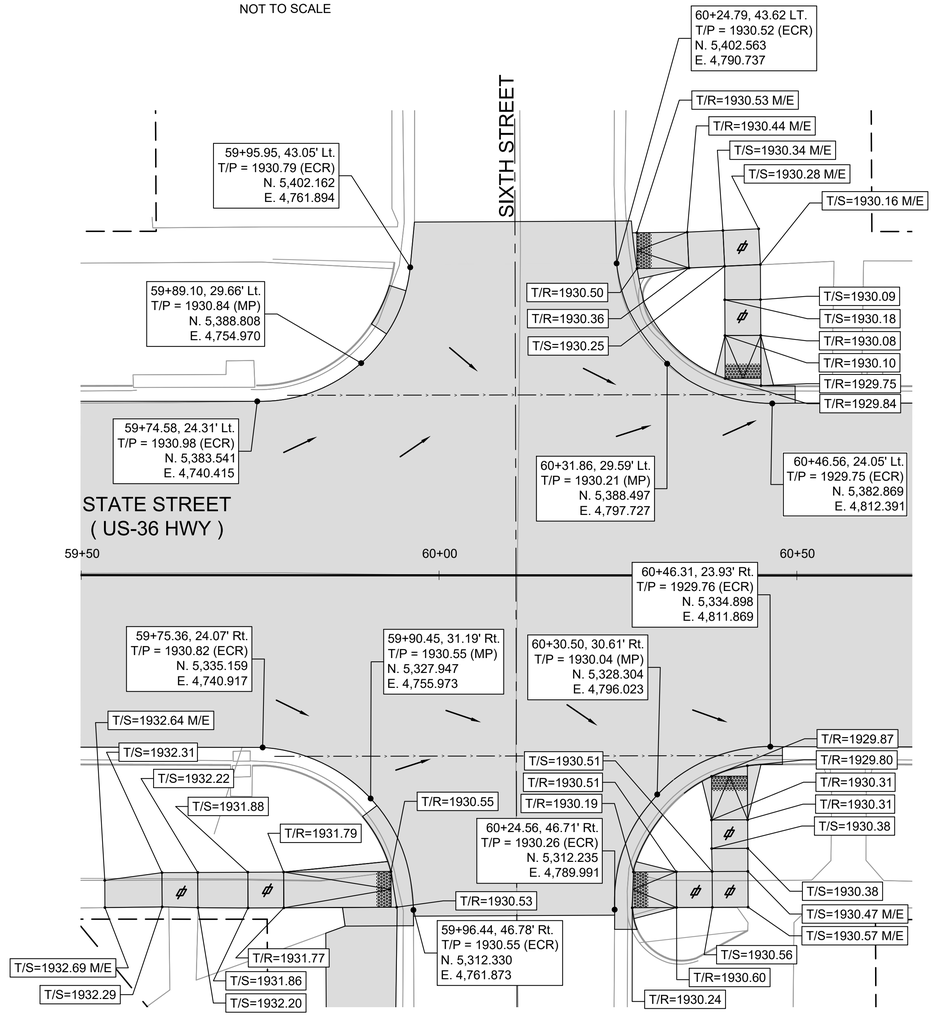
✳ SIDEWALK EDGE CURB DETAIL

NOT TO SCALE



FIFTH STREET & STATE STREET (US-36 HWY)

SCALE: 1"=10'



SIXTH STREET & STATE STREET (US-36 HWY)

SCALE: 1"=10'

10' 0 10' 20'

SCALE: 1" = 10'

CITY OF PHILLIPSBURG, KANSAS

INTERSECTION DETAILS

BG Project #20-1374M

20-1374M					
STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	36-74 KA-5433-01	2021	8	52	

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

GENERAL NOTES

All Top of Curb elevations on this sheet are for "Curb and Gutter - Type I". The Contractor shall be responsible for adjusting the height of the curb at locations where "Curb and Gutter - Type II" or other types of Curb and Gutter are to be constructed.

Provide a 4 ft. transition from full curb height to no curb height at locations where the end of the curb and gutter does not connect to an existing curb or a structure.

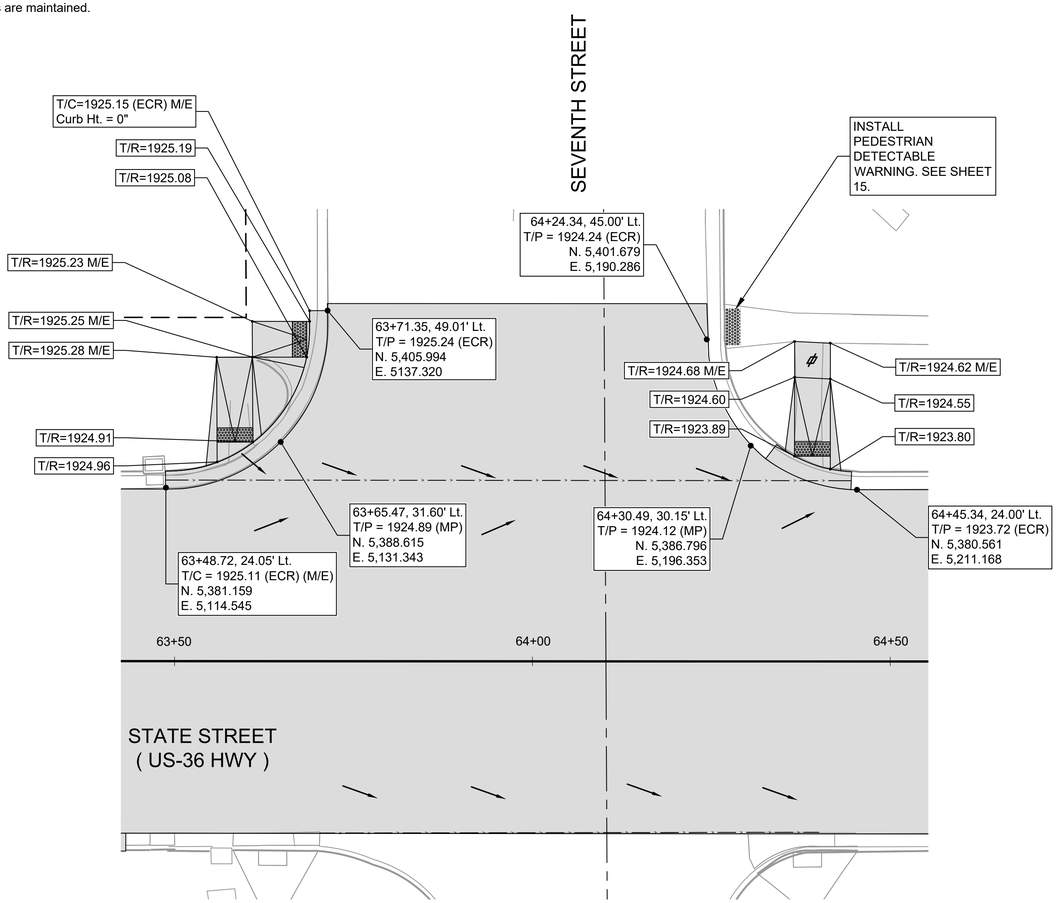
ø= Level area in the sidewalk/sidewalk ramp alignment which shall be sloped to maintain positive drainage, but in no case shall the slope exceed 2% measured in any direction. See the access ramp construction details for more information.

Where new concrete sidewalk abuts existing sidewalks, the tie-in location shall be flush. No vertical discontinuities will be allowed.

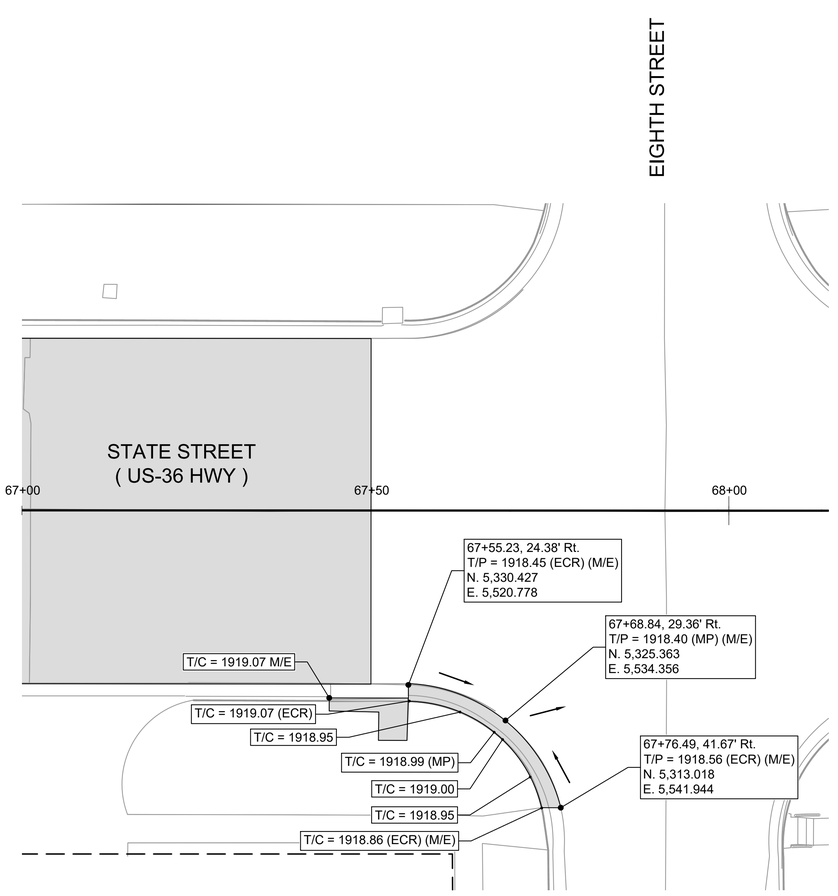
Field verify that that a counter slope of 5% or flatter is used at the base of curb ramps (per RD725) and that indicated drainage patterns are maintained.

LEGEND

→	Proposed Direction of Surface Drainage
10'	Proposed Contraction Joint & Joint Length
ECR	End of Curb Return
QP	Quarter-point of Curb Return
MP	Mid-point of Curb Return
T/C	Top of Curb (Type CG1 Curb and Gutter)
T/P	Top of Pavement
T/R	Top of Ramp
ø	Landing
T/S	Top of Sidewalk
T/W	Top of Wall
M/E	Match Existing
	Proposed Concrete



SEVENTH STREET & STATE STREET (US-36 HWY)
SCALE: 1"=10'



EIGHTH STREET & STATE STREET (US-36 HWY)
SCALE: 1"=10'

10' 0 10' 20'
SCALE: 1" = 10'

CITY OF PHILLIPSBURG, KANSAS

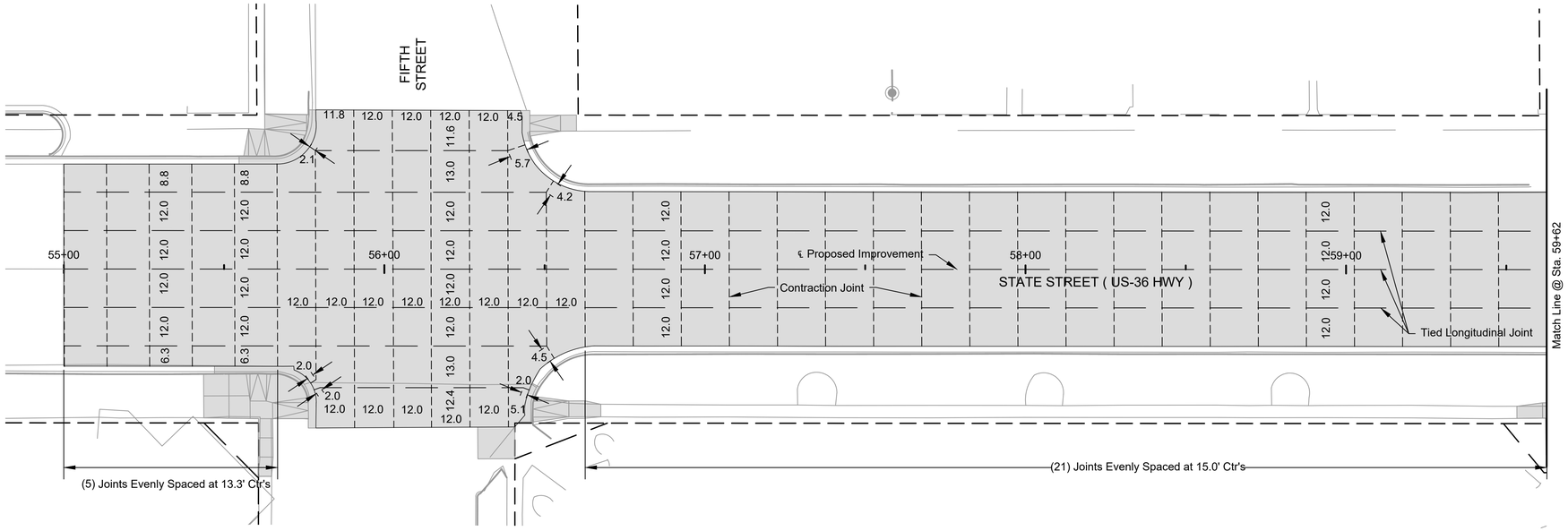
INTERSECTION DETAILS

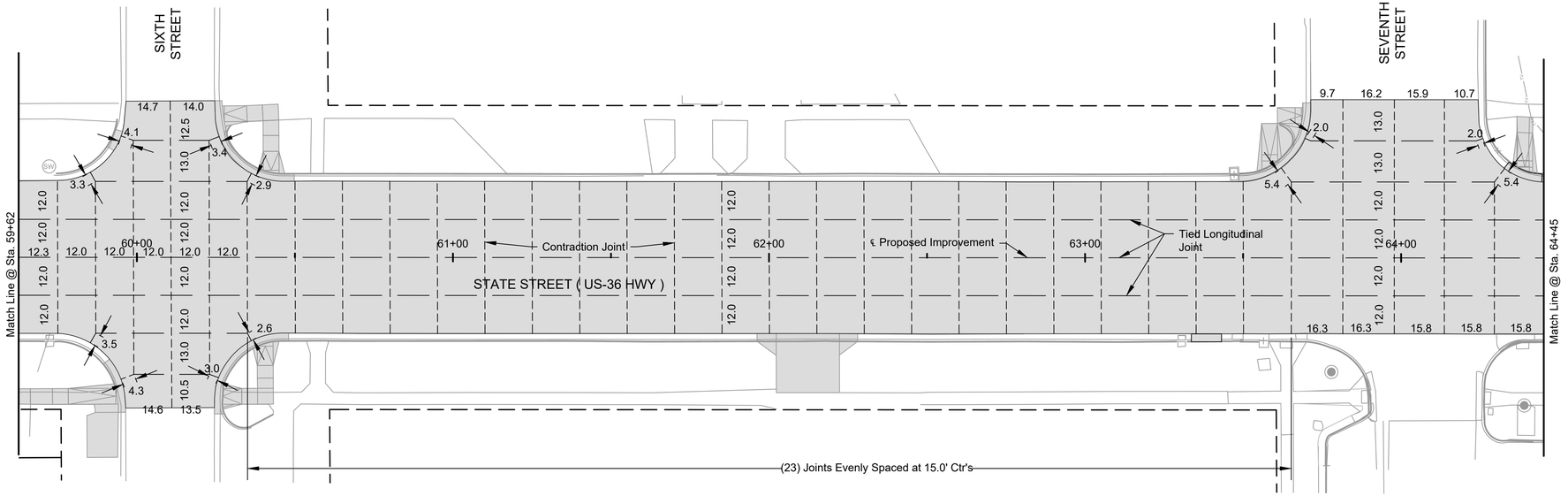
BG Project #20-1374M

20-1374M

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	9	52

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS





LEGEND

- 10' — Proposed Contraction Joint & Joint Length
- Proposed Longitudinal Joint
- Proposed Concrete

NOTES

1. Unless noted otherwise, all transverse joints on the mainline are perpendicular to the Centerline.

20' 0 20' 40'

SCALE: 1" = 20'

CITY OF PHILLIPSBURG, KANSAS

PAVING DETAILS
(JOINTING PLAN)

BG Project #20-1374M

20-1374M

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	10	52

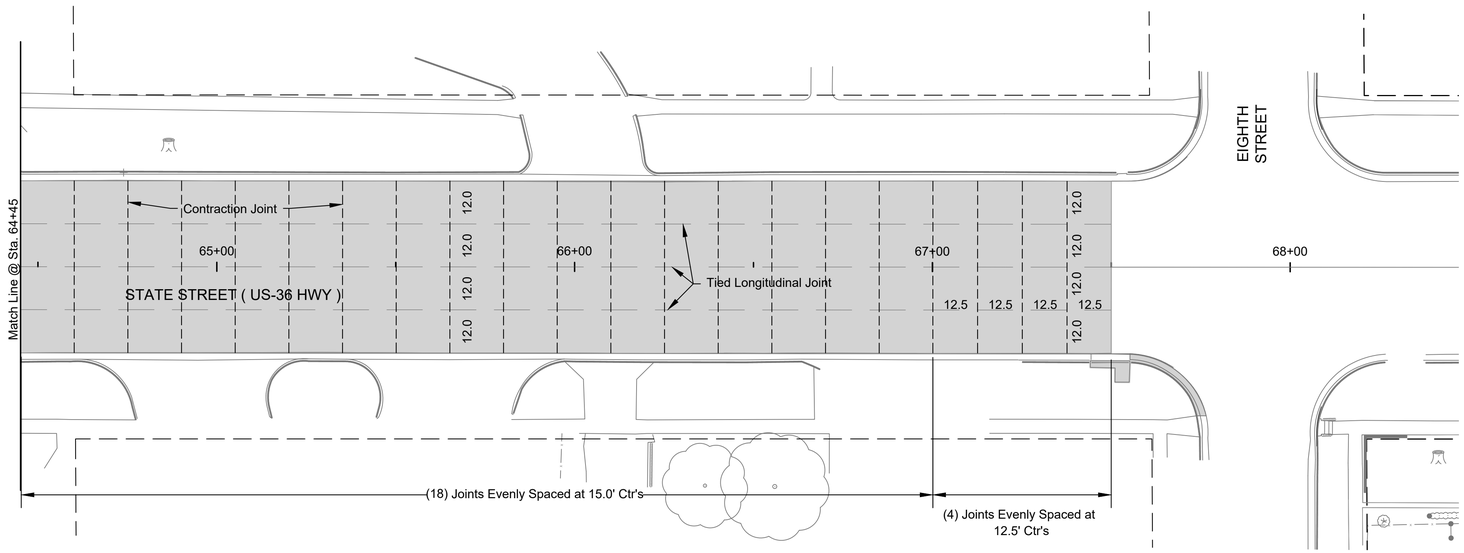
BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

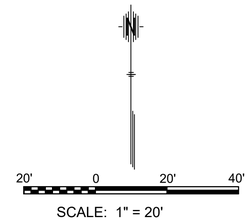
LEGEND

- 10' — Proposed Contraction Joint & Joint Length
- Proposed Longitudinal Joint
- Proposed Concrete

NOTES

1. Unless noted otherwise, all transverse joints on the mainline are perpendicular to the Centerline.





SCALE: 1" = 20'

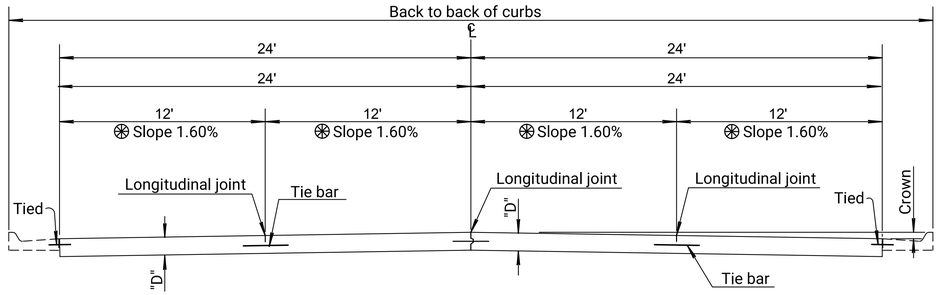
CITY OF PHILLIPSBURG, KANSAS

PAVING DETAILS
(JOINTING PLAN)

BG Project #20-1374M

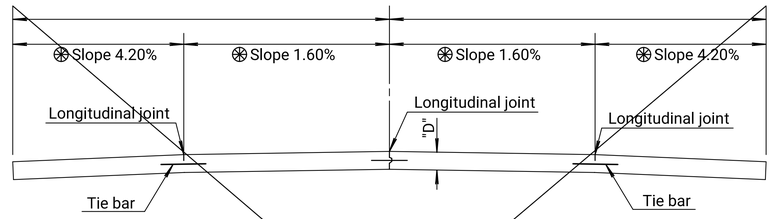
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	11	52

Note: Designer to add applicable dowel sizes.



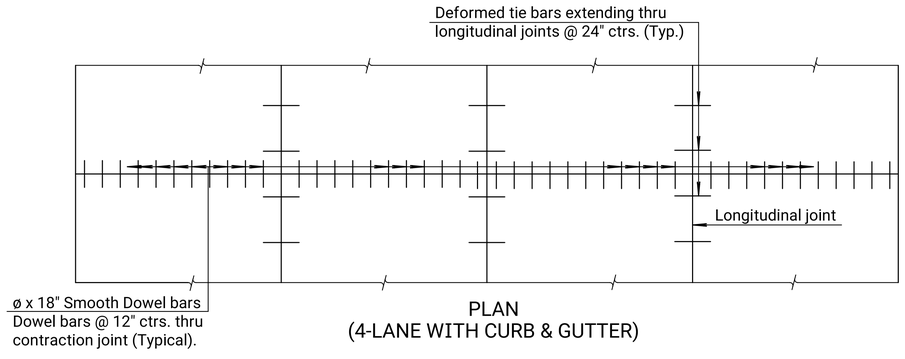
For Curb & Gutter details
See Standard Drawing RD635.

TRANSVERSE SECTION
(4-LANE WITH CURB & GUTTER)

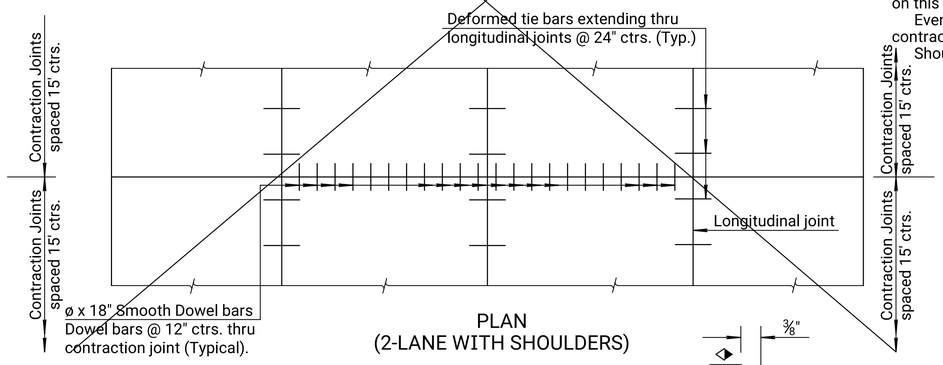


TRANSVERSE SECTION
(2-LANE WITH SHOULDERS)

⊛ Normal cross slopes. See Typical Section or Cross Sections for variations.



PLAN
(4-LANE WITH CURB & GUTTER)



PLAN
(2-LANE WITH SHOULDERS)

GENERAL NOTE

Epoxy coat all deformed tie bars that are straight. Patch any damage to the epoxy coating in accordance with the Standard Specifications.

Use billet steel Grade 40 reinforcing for deformed tie bars that require bending, may be epoxy coated at the Contractor's option.

Place pressure relief joint at the end of the bridge approach pavement slab (no bars through joint). For details of pressure relief joint see Standard Drawing RD712.

Use load transfer devices as shown in details at all construction joints on mainline pavement unless otherwise noted. Shoulder contraction joints have no dowels unless specifically shown on the plans.

◈ Fill all sawed joints on the project in accordance with the Standard Specifications with the exception of those joints in pavement constructed over Cement or Asphalt Treated Base.

✳ Use single saw cut, ⅛" wide, joint in pavement constructed over Cement or Asphalt Treated Base (Non-Sealed Joint Sawcut). Use single saw cut, ⅛" wide, joint for shoulder pavement adjacent to mainline pavement constructed over Asphalt or Cement Treated Base (Non-Sealed Joint Sawcut). See detail this sheet.

Shape all keyed joints similar to section of recessed form leg as shown on this sheet.

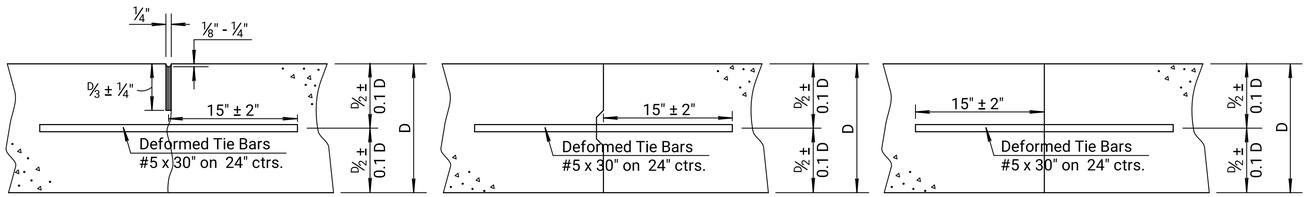
Evenly space tie bars along the length of slab with no tie bar within 12" of contraction joint. All longitudinal joints are tied.

Shoulder rumble strips will not be constructed as part of this project.

DOWEL SIZE	
D (in.)	Diameter
6 < D < 9	1"
9 ≤ D < 11	1¼"
D ≥ 11	1½"

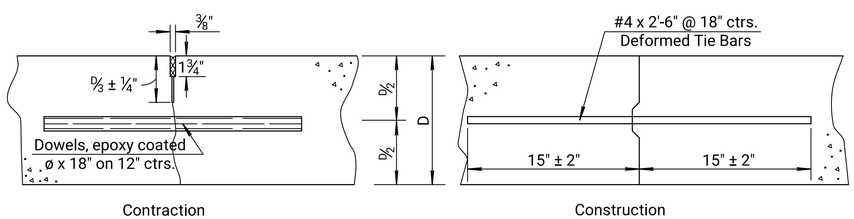
PAVEMENT DEPTH

D= 10"



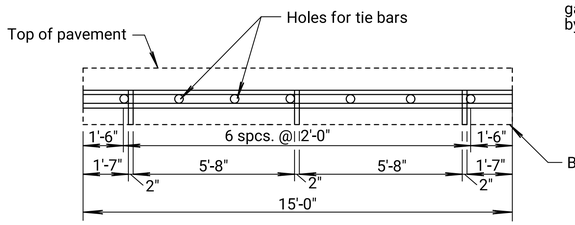
Note: For longitudinal construction joints the contractor has the option of using either the keyed or butt type. Place deformed tie bars mid-depth of the shoulder.

LONGITUDINAL JOINTS



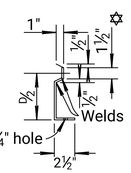
TRANSVERSE JOINTS

Note: Construct contraction joints at plan locations or at the Engineer's direction.
When necessary to interrupt continuous placement for a substantial length of time or at the end of a day's paving, the Contractor has the option of ending placement at a contraction joint or with a construction joint located a minimum of five (5) feet from a contraction joint. Construct either joint type by placing a header at the end of the pour or by paving past the joint location. After the concrete has hardened, saw joint and drill holes for tie bars or dowels.

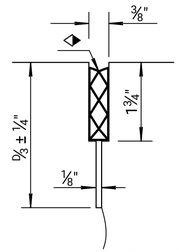


METAL STRIP FOR
LONGITUDINAL CONSTRUCTION JOINT

To be used only against forms, do not extend through contraction joints.
For automated placement tie bars are spaced at uniform 24" centers.
✡ Use snap-in leg or other approved design in lieu of welded leg.

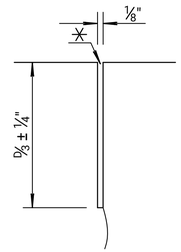


SECTION OF
RECESSED
FORM LEG



DETAIL OF SEALED
JOINT SAWCUT

Make an initial ⅛" saw cut (D/3 ± ¼" depth); the second ⅜" saw cut is a separate operation done after concrete has gained sufficient strength to avoid spalling as determined by the Engineer.



DETAIL OF NON-SEALED
JOINT SAWCUT

Make only the initial ⅛" saw cut after concrete has gained sufficient strength to avoid spalling as determined by the Engineer.

NO.	DATE	REVISIONS	BY	APP'D
19	5-17-13	Revised Note, Longitudinal Joints	S.W.K.	J.O.B.
18	3-21-12	Revised Table, Dowel Size	S.W.K.	J.O.B.
17	1-9-12	Added Detail, Non Sealed Joint	S.W.K.	J.O.B.
16	8-18-10	Revised Dowel Size & Notes	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT DOWEL JOINTED NON-REINFORCED

RD708

FHWA APPROVAL	10-23-13	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

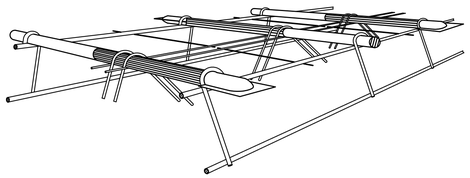
KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

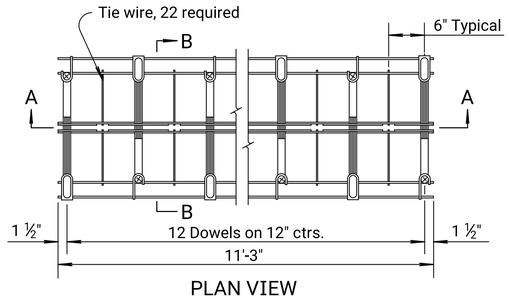
Plotted 29-MAR-2018 13:20

Drawn By : arockers
File : working_rd708.dgn

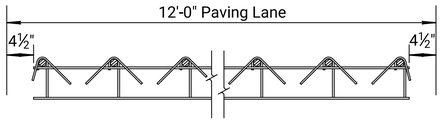
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	12	52



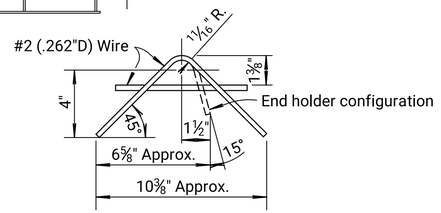
PERSPECTIVE VIEW

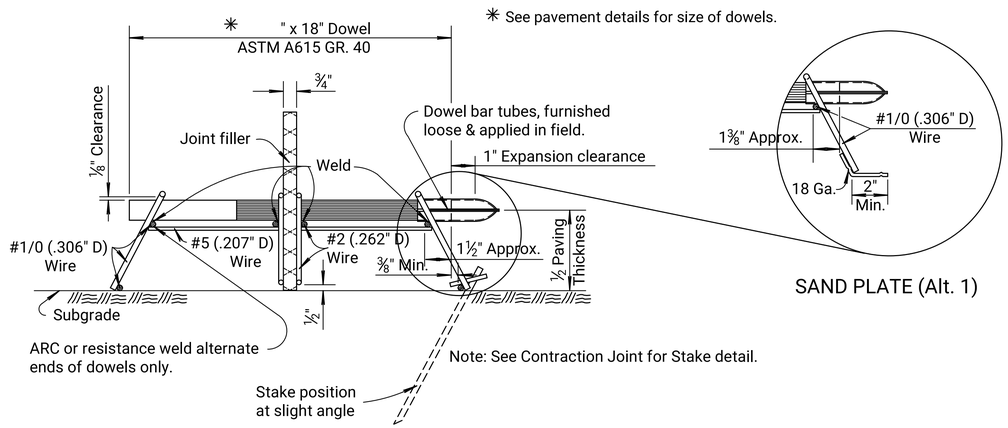


PLAN VIEW



SEC. A-A





SEC. B-B

EXPANSION JOINT

GENERAL NOTE

Coat each dowel bar with an epoxy coating that meets the standard specifications. Uniformly apply the powdered epoxy coating according to accepted practices and the coating manufacturer's recommendations. The coating need not be applied to the end faces of the bars and will not be required within 2" of the end which will be fixed in the supporting bracket by welding.

Cut the dowel bars to length in such a manner to result in no appreciable deformation of the ends.

Dowel Baskets

Wire sizes shown are minimum required.

Stake baskets to subgrade as shown. Use ramset or similar type fastener with clip when subgrade condition requires it.

Sides held together with tie wire, allowing quick separation of sides and insertion of expansion material, provided in the field.

Use one length of Preformed Expansion Joint filler (Type B), or other approved material as determined by the Engineer, cut to fit crown and subgrade for each lane of pavement as expansion joint filler.

Stretch a string line between the pavement forms along the center line of the joint.

Visually inspect bond breaker was applied to the dowel bars in accordance with KDOT's Standard Specifications prior to placing concrete pavement.

Carefully level the entire joint assembly so that the dowels are parallel to the slab surface and free to slide in the dowel holders. Replace any coating scraped off the dowels during assembly.

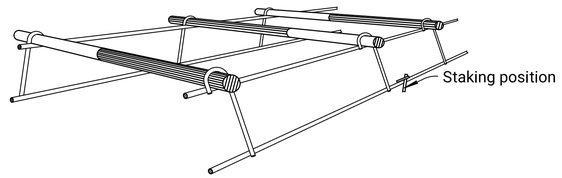
Check each completed contraction joint assembly to be certain the vertical plane of the joint will be perpendicular to the finished surface of the slab and at a right angle with the center line of the slab unless otherwise shown on the plans. Check the dowels to be certain they are level and will remain in a position parallel with the finished surface of the slab.

Place concrete over and adjacent to the joint in accordance with the requirements of the Standard Specifications.

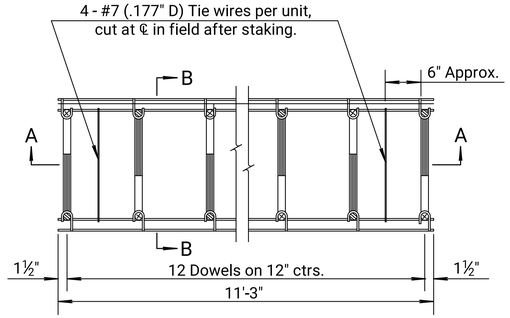
After completion of machine finishing, floating, and straight edging the surface, carefully remove the concrete over the filler and edge the joint with an edger of the proper size.

Install expansion joint material in the field.

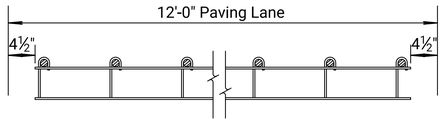
Alternative designs may be used in lieu of the type shown as approved by the Engineer.



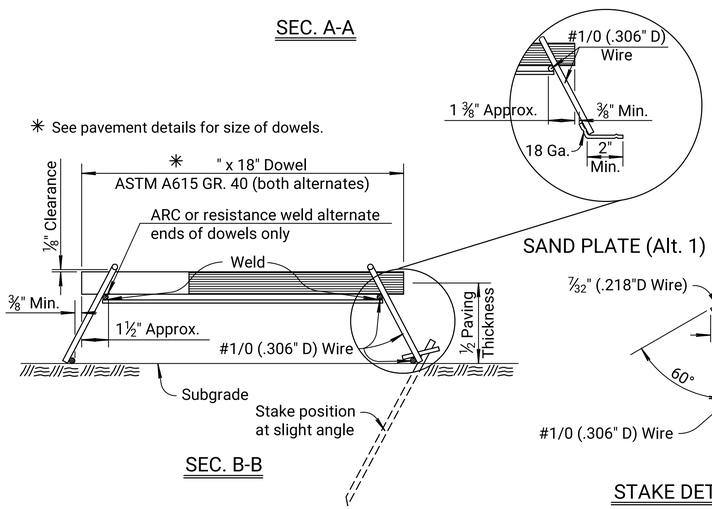
PERSPECTIVE VIEW



PLAN VIEW

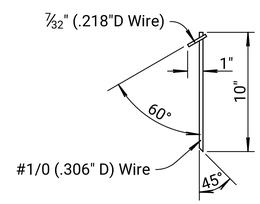


SEC. A-A



SEC. B-B

CONTRACTION JOINT



STAKE DETAIL

(6 Pieces minimum required)

GENERAL NOTE

Coat each dowel bar with an epoxy coating that meets the standard specifications. Uniformly apply the powdered epoxy coating according to accepted practices and the coating manufacturer's recommendations. The coating need not be applied to the end faces of the bars and will not be required within 2" of the end which will be fixed in the supporting bracket by welding.

Cut the dowel bars to length in such a manner to result in no appreciable deformation of the ends.

Dowel Baskets

Wire sizes shown are minimum required.

Stake baskets to subgrade as shown. Use ramset or similar type fastener with clip when subgrade condition requires it.

Stretch a string line between the pavement forms along the center line of the joint. Carefully mark the position of the joint so the saw cut will coincide with the center line of the joint.

Visually inspect bond breaker was applied to the dowel bars in accordance with KDOT's Standard Specifications prior to placing concrete pavement.

Carefully level the entire joint assembly so that the dowels are parallel to the slab surface and free to slide in the dowel holders. Replace any coating scraped off the dowels during assembly.

Check each completed contraction joint assembly to be certain the vertical plane of the joint will be perpendicular to the finished surface of the slab and at a right angle with the center line of the slab unless otherwise shown on the plans. Check the dowels to be certain they are level and will remain in a position parallel with the finished surface of the slab.

Place concrete over and adjacent to the joint in accordance with the requirements of the Standard Specifications.

Alternative designs may be used in lieu of the type shown as approved by the Engineer.

NO.	DATE	REVISIONS	BY	APP'D
9	6-3-15	Rem. Opt., Mechanical Placement	T.T.R.	S.W.K.
8	2-15-06	Chg. Grade 60 to Grade 40 Steel	S.W.K.	J.O.B.
7	5-5-04	Revision on Epoxy coating	S.W.K.	J.O.B.
6	4-9-03	Rev. General Note on Epoxy coating	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CONTRACTION & EXPANSION JT.
DOWEL ASSEMBLIES

RD735

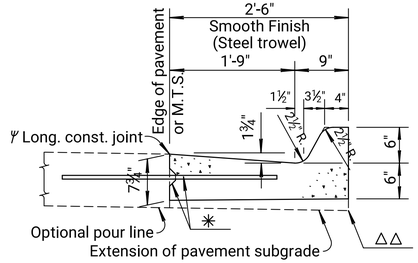
FHWA APPROVAL	3-30-16	APP'D.	SCOTT W. KING	
DESIGNED	DETAILED	QUANTITIES	TRACED	
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Hecht	

KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

Plotted 29-MAR-2018 16:29

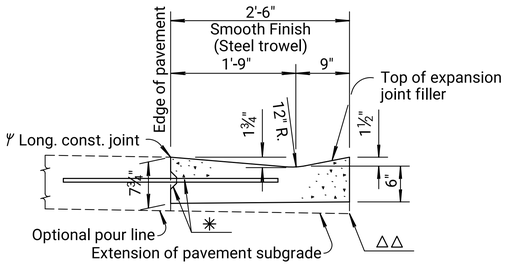
Drawn By : arockers
File : working_rd735.dgn



TYPICAL SECTION

Note: Conc. C.&G. I contains 0.060 cu. yds. Conc. Grade 3.0 (AE) per lin.ft.

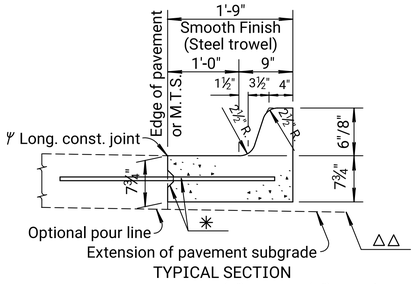
COMBINED CURB & GUTTER - TYPE I (2'-6" WIDTH)



TYPICAL SECTION

Note: Conc. C.&G. II contains 0.053 cu. yds. Conc. Grade 3.0 (AE) per lin.ft.

COMBINED CURB & GUTTER - TYPE II (2'-6" WIDTH)



TYPICAL SECTION

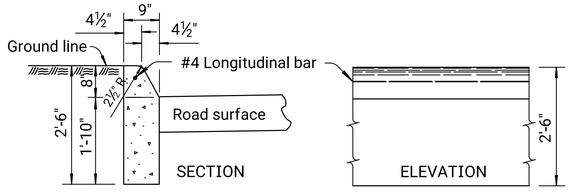
Note: Conc. C.&G. III contains 0.054 (8") & 0.051 (6") cu. yds. Conc. Grade 3.0 (AE) per lin. ft.

COMBINED CURB & GUTTER - TYPE III (1'-9" WIDTH)

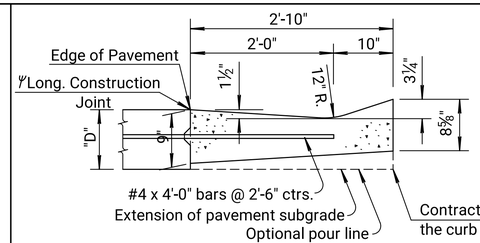
✳ Longitudinal construction joint and #4 x 3'-0" bars @ 2'-6" ctrs., where concrete pavement is constructed.

△△ Contractor has the option of thickening the curb and gutter as shown.

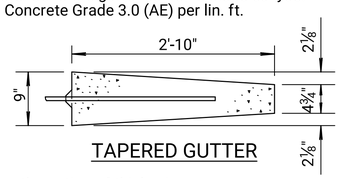
Note: Use Concrete Grade 3.0 (AE) throughout.
All exposed edges shall be finished with an edging tool.
Place a 1" Preformed Expansion Joint Filler (Nonextruding, Type B) at a spacing not to exceed 250'.



PROTECTION CURB 8"

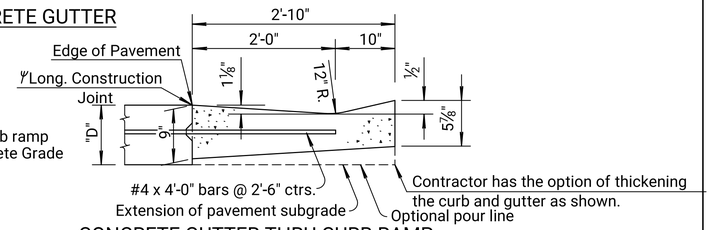


Note: Concrete gutter contains 0.065 cu. yds. Concrete Grade 3.0 (AE) per lin. ft.



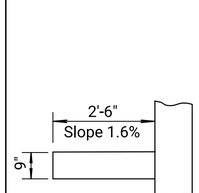
TAPERED GUTTER

CONCRETE GUTTER

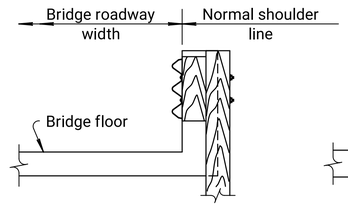


Note: Concrete gutter thru curb ramp contains 0.065 cu. yds. Concrete Grade 3.0 (AE) per lin. ft..

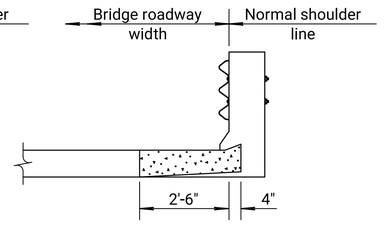
CONCRETE GUTTER THRU CURB RAMP



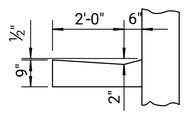
SECTION B-B



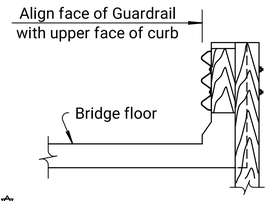
CONTROL POINT FOR FULL WIDTH ROADWAY BRIDGE



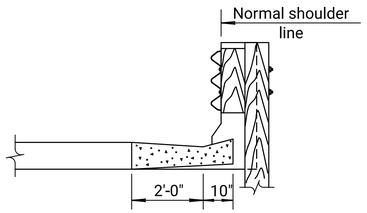
GUTTER NEAR E.W.S.



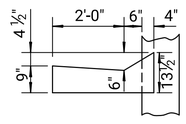
SECTION C-C



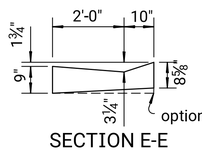
✡ CONTROL POINT FOR BRIDGE WITH SAFETY TYPE CURB



FULL GUTTER SECTION

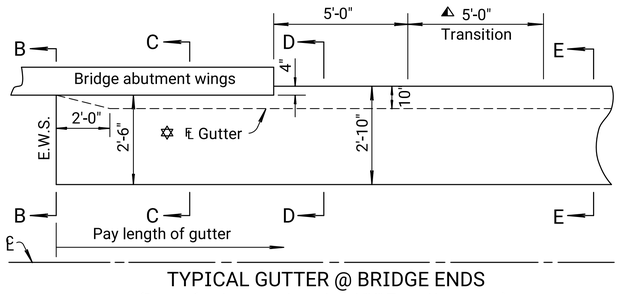


SECTION D-D



SECTION E-E

At locations where the centerline grade is relatively flat and the pavement grade is such that the gutter will direct drainage onto the bridge, the flowline depth may be reduced as directed by the Engineer to facilitate drainage.



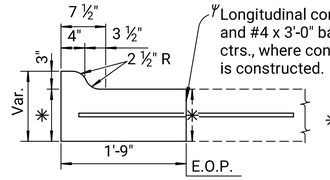
TYPICAL GUTTER @ BRIDGE ENDS

(Drawn for down grade end and "U" Type Abutments)

Note: Shaping of gutter is to be Subsidiary to "Gutter (AE)".

◭ Transition gutter to standard 2'-10" gutter section.

FOR RETROFIT OF BRIDGE APPROACHES WITH GUTTER



✳ Note: Thickness to match adjacent pavement.

COMBINED CURB AND GUTTER (SPECIAL) (1'-9" WIDTH)

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	13	52

GENERAL NOTE

Combined curb and gutter or gutter adjoining concrete pavement may, at the contractor's option, be constructed either monolithically or separately, using either the mix used in the concrete pavement or Concrete Grade 3.0 (AE). The combined curb and gutter or gutter shall have the same section as shown on the plans. If constructed monolithically, the longitudinal joint and tie bars shall be omitted from the combined curb and gutter or gutter. Pavement Joints shall be continued through curb or gutter and no other planes of weakness will be required. Joints in the combined curb and gutter or gutter are to be filled with the same material as used for the pavement joints.

Expansion joints in the combined curb and gutter are to be placed opposite expansion joints in the pavement.

Where combined curb and gutter or gutter does not abut concrete pavement or concrete base course, omit tie bars and place a 1" Preformed Expansion Joint Filler (Type B) cut to the dimensions of the combined curb and gutter or gutter, at a spacing not to exceed 250' and at the ends of curb returns. Planes of weakness shall be constructed at 10'-0" intervals.

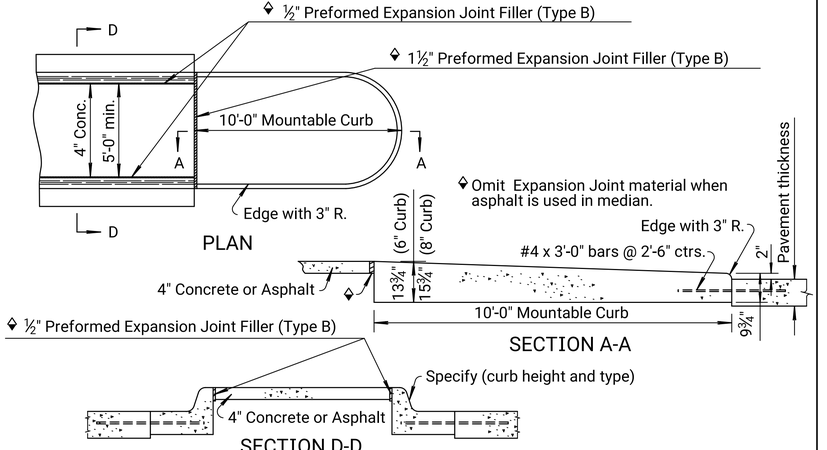
A 4' length of transition from normal gutter section to the tapered gutter section shall be used at the ends of each run of gutter except where the gutter abuts a curb, such as at the end of a bridge. Inlets shall be located so as not to fall within this transition section.

Where pressure relief joint is placed across the pavement, and gutter or curb and gutter is continued on for more than 10', use 4"x4" membrane sealant installed with bonding adhesive through gutter section, shaped to fit gutter or curb and gutter. See Std. Drawing RD712.

For expansion joint treatment where combined curb and gutter or gutter abuts a bridge wing on a U-type abutment see bridge drawings.

Longitudinal joints shall be sawed and sealed with joint sealant, see Standard Specifications.

℄ If constructed monolithically, the longitudinal joint is not required.



Note: Expansion joints shall be placed in concrete median as follows. In long runs expansion joints Expansion joints in the median shall match expansion joints in the curb and gutter with a maximum spacing of 125'. Plane of weakness in the median shall match plane of weakness in curb and gutter.

TYPICAL NOSE DETAILS FOR RAISED MEDIANS

Note: Additional Concrete Grade 3.0 (AE) needed to complete median nose shall be subsidiary to the bid item "Combined Curb & Gutter".

NO.	DATE	REVISIONS	BY	APP'D
20	2-23-17	Det., Conc. Gutter Thru Curb Ramp	T.T.R.	S.W.K.
19	1-29-13	Added Detail, Comb. C&G (Sp.)	S.W.K.	J.O.B.
18	8-13-12	Revised General Note	S.W.K.	J.O.B.
17	7-2-09	Rev. nose details, jt. sealant & retro.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CURB, GUTTER AND COMBINED CURB & GUTTER

RD635

FHWA APPROVAL	3-7-17	APP'D.	SCOTT W. KING
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.

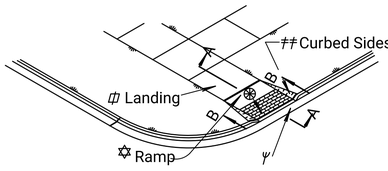
KDOT Graphics Certified 03-28-2018

KDOT Graphics Certified

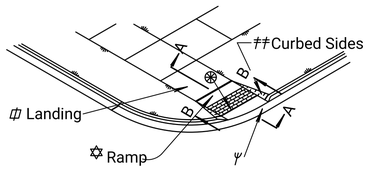
Plotted :28-MAR-2018 15:57

Drawn By : jacob.lawhorn
File : working_rd635.dgn

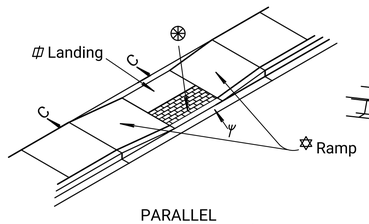
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	14	52



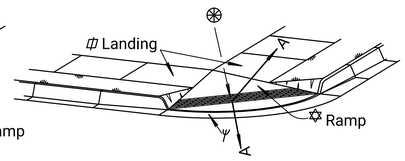
PERPENDICULAR
CURB RAMP (TYPE I)



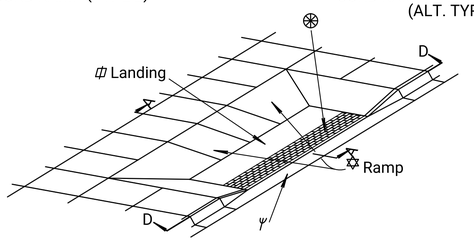
PERPENDICULAR
CURB RAMP THRU CURB RADIUS
(ALT. TYPE I)



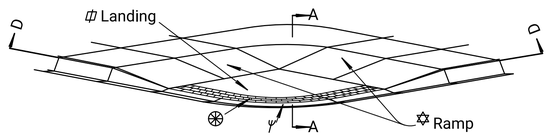
PARALLEL
CURB RAMP (TYPE 2)



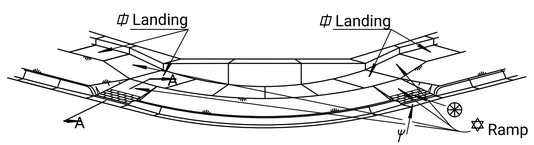
PARALLEL
CURB RAMP THRU CURB RADIUS
(ALT. TYPE 2)



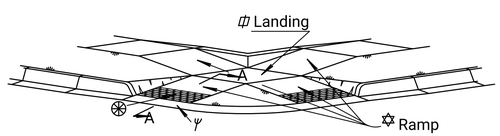
BLENDED TRANSITION
(TYPE 3)



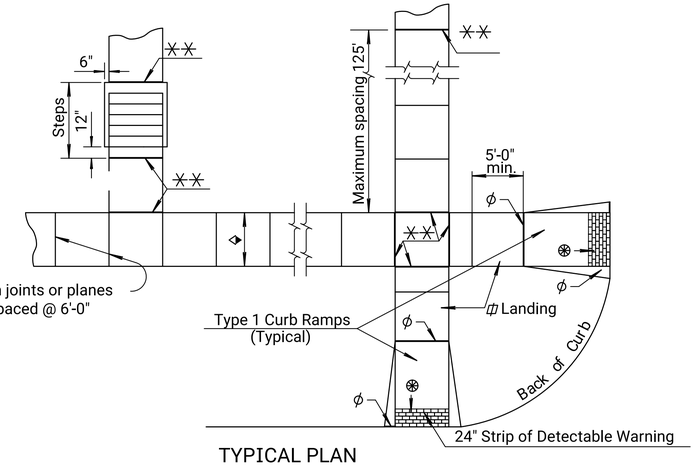
BLENDED TRANSITION
THRU CURB RADIUS (ALT. TYPE 3)



COMBINATION PERPENDICULAR/PARALLEL
CURB RAMP (TYPE 4)



COMBINATION PERPENDICULAR/PARALLEL
CURB RAMP (ALT. TYPE 4)



TYPICAL PLAN

ϕ Expansion Joint (¾" Redwood board) placed at either back of curb line, at sidewalk back of curb line, or at sidewalk line. Alternate expansion joint material may be used as approved by the Engineer.

⚔⚔ Expansion joint (¾" Redwood board) located as shown. Alternate expansion joint material may be used as approved by the Engineer.

⧫ The minimum width of newly constructed sidewalk is 5'-0". Where existing conditions prohibit the use of 5'-0" wide sidewalk, 4'-0" wide sidewalk may be used. Where sidewalk width is less than 5'-0" construct 5'-0" x 5'-0" passing spaces located at 200' intervals (max) as shown in the Passing Space Detail. In general, where new sidewalk is constructed parallel or adjacent to a roadway the sidewalk running slopes will match the grade of the adjacent roadway.

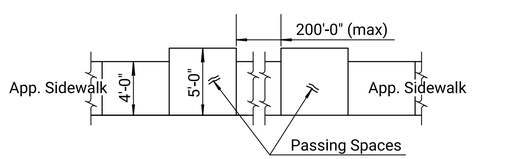
✡ New construction ramp running slopes are 5% (min) to 8.3% (max). Ramp slopes for blended transitions are 5% or flatter. The maximum allowable ramp cross slope is 2% or flatter. Match the ramp width to the width of the approach sidewalk. Curb ramp lengths will vary with curb height. Curb ramp lengths are 5'-0" (min) to 15'-0" (max). All other ramp lengths are 5'-0" (min) to 30'-0" (max). Where roadway grades are relatively flat and curb ramp lengths will exceed 15'-0", ramps may be constructed in succession to tie into existing sidewalk. Maintain ramp slopes and dimensions as previously stated and install a landing between successive ramp runs.

⎅ Use a landing slope of 2% or flatter. Landings are the same width as ramps and adjacent sidewalk with a length measured in the direction of the street crossing of 5'-0" (min). Landings are not required where the ramp running slope is 5% or flatter.

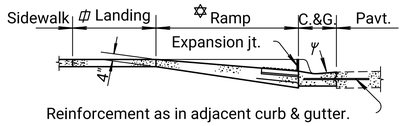
ψ Use a counter slope of 5% or flatter at the base of curb ramps. Refer to Standard Drawing RD725A for additional curb and gutter details.

⊛ Detectable warning installation is typical and required on Perpendicular Ramps (Type 1), Parallel Ramps (Type 2), Blended Transitions (Type 3), median ramp crossings with widths greater than or equal to 6'-0", and other locations as shown in the plans. Install detectable warnings parallel to pedestrian travel except where otherwise shown in the plans. See Standard Drawing RD725A for additional details.

‡‡ Use flared sides in place of curbed sides as shown in Flared Side Alt. when not located adjacent to landscaping, street furniture, chains, fencing, or railing. Curbed sides are not permitted within the pedestrian access route. See PROWAG for pedestrian access route definition.

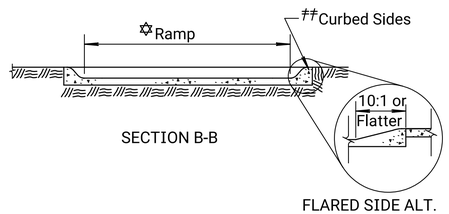


PASSING SPACE
DETAIL



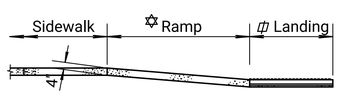
Reinforcement as in adjacent curb & gutter.

SECTION A-A

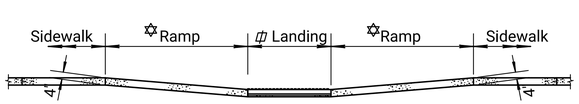


SECTION B-B

FLARED SIDE ALT.



SECTION C-C



SECTION D-D

GENERAL NOTES

Construct sidewalk and ramps in accordance with the current Public Rights of Way Accessibility Guidelines (PROWAG).

The details depicted here may not be appropriate for all locations. Construct to meet this criteria on all roadway alteration projects as defined by the Department of Justice/ Department of Transportation Joint Technical Assistance on ADA Title II Requirements. For an existing sidewalk facility where the sidewalk will be replaced, replace sidewalk in accordance with PROWAG.

Details shown on this sheet apply to newly constructed and existing sidewalk and ramps where roadway alteration projects take place. See KDOT's Standard Specifications for additional information.

Provide ramps at all corners of street intersections where there is an existing or proposed sidewalk and curb. Provide curb ramps at mid-block walk locations for hospitals, medical centers, and athletic stadiums.

Locate ramps as shown on the plans or as directed by the Engineer.

Do not place drainage structures in line with ramps except where existing drainage structures are being utilized in the new construction. Ramp locations should take precedence over the location of drainage structures. Where existing manhole access lids are located on ramps within the area of the detectable warnings and the manhole lid cannot be removed or relocated; install a lid with a detectable warning surface in accordance with PROWAG. Limit drainage across ramps where practicable.

Construct ramps with uniform grade free of sags and short grade changes.

Place ¾" Redwood expansion joints flush with the surface at a maximum spacing of 125'. Place ¾" Redwood expansion joints at sidewalk junctions, see plan details. Where sidewalk abuts a curb place ¾" Redwood board expansion joint flush with the surface.

Place ½" premolded (Type B or C) joint filler where sidewalk is parallel and adjacent to a rigid surface.

⚠ Place sidewalk shown to be constructed in back of an entrance 6" thick with welded wire mesh reinforcement. Gauge and spacing of wires are the same as entrance pavement (See Reinforcement Diagram). The bid item will be "Sidewalk Construciton" either with or without air entrainment. Macro fiber reinforcement may be substituted for welded wire. See KDOT's Standard Specifications for additional information. Slope sidewalk toward the street at 2% or flatter. Slope or depress sidewalk where necessary to fit alleys and entrances, see plans for details.

Contractor may opt to use Concrete Grade 3.0 (AE) throughout for construction of steps, but all work and materials are paid for under the bid item "Grade 3.0 Conc. (Misc.)".

All work and materials needed to construct sidewalk will be paid for under the bid item "Sidewalk Construction".

All work and materials needed to construct ramps will be paid for under the bid item "Sidewalk Ramps".

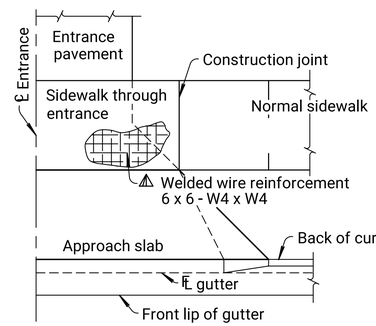
See Standard Drawing RD725A for additional information.

Ramps shall be present at each end of a crosswalk.

For handrails with steps see Standard Drawing RD725B for details.

For handrails with ramps see Standard Drawing RD725C for details.

For alley and entrance pavement see Standard Drawing RD726 for details.



REINFORCEMENT DIAGRAM
SIDEWALK THROUGH ENTRANCE

NO.	DATE	REVISIONS	BY	APP'D
13	10-31-17	Joint Filler Type C Added	A.L.R.	S.W.K.
12	2-23-17	Rev. Ramp Typ., Gen. Note, & Details	T.T.R.	S.W.K.
11	10-17-11	Revised General Note	S.W.K.	J.O.B.
10	5-23-11	Revised notes	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

SIDEWALK, RAMPS, & STEPS

RD 725

FHWA APPROVAL	3-5-2018	APP'D.	SCOTT W. KING
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN.CK. 725	TRACE CK.

KDOT Graphics Certified 03-26-2018

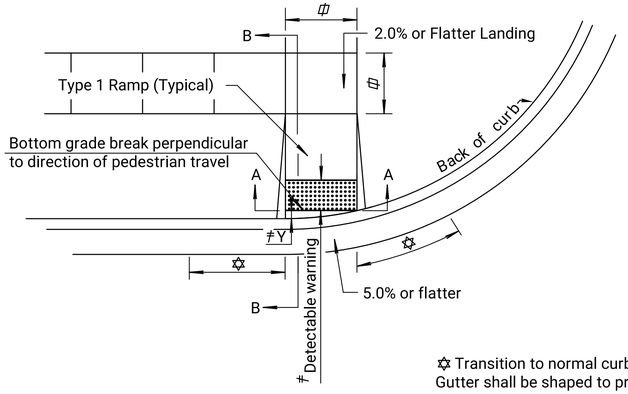
KDOT Graphics Certified

Note to Designer: Placing newly constructed curb ramps through curb radii should be avoided wherever practicable. The use of Parallel Curb Ramp Thru Curb Radius (Alt. Type 2) should be avoided wherever practicable. Review locations of fixed objects. Placing fixed objects in conflict with sidewalk and ramps should be avoided. Fixed objects may include, but are not limited to, fire hydrants, utility cabinets, drainage structures, manholes, inlets, signal poles, and utility poles.

Plotted 26-MAR-2018 15:45

Drawn By : arockers
File : rd725.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	15	52

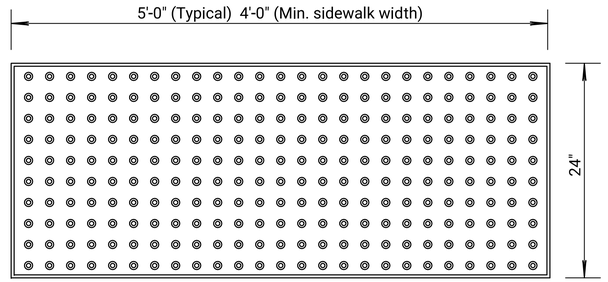


TYPICAL PLAN

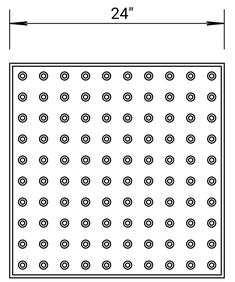
✡ Transition to normal curb and gutter section. Gutter shall be shaped to provide positive drainage.

⎅ See Standard Drawing No. RD725 for additional details.

≠ When the dimension "Y" from the back of curb to the bottom ramp grade break is greater than 5'-0" or the ramp is not located through a curb radius, place detectable warning at the back of curb. Otherwise, place detectable warning at the bottom grade break as shown.



ϒ COMPOSITE PANEL with TRUNCATED DOMES



ϒ PRESTRESSED RAMP PANEL with TRUNCATED DOME SURFACE

GENERAL NOTES

Construct sidewalk and ramps in accordance with the current Public Rights of Way Accessibility Guidelines (PROWAG).

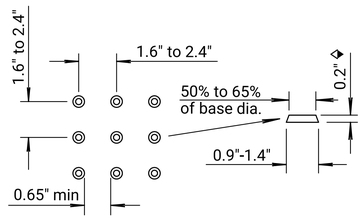
Details depicted here may not be appropriate for all locations. Design to meet this criteria on all roadway alteration projects as defined by the Department of Justice/ Department of Transportation Joint Technical Assistance on ADA Title II Requirements. For an existing sidewalk facility where the sidewalk will be replaced, replace sidewalk according to this drawing to the maximum extent feasible.

Install detectable warning surfaces at all ramp locations unless otherwise shown. Do not install detectable warning surfaces through residential driveway crossing locations. Use Paving Brick, Prestressed or Composite Panel (Truncated Dome Surface) units that meet the requirements of the Standard Specifications and comply with PROWAG. Use a contrasting color paving brick or panel to adjacent surfaces. Where existing manhole access lids are located on ramps within the area of the detectable warnings and the manhole lid cannot be removed or relocated, install a lid with a detectable warning surface in accordance with PROWAG.

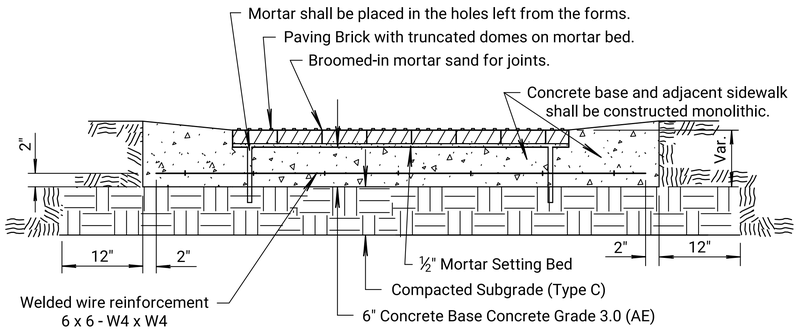
Cover the ramp width and 24" length with truncated dome surface, see examples Standard Drawing RD725 & RD725A. Saw cut (only) bricks or panels with not less than 25% of a full brick or panel installed. Place Truncated Dome Bricks or Panels to align parallel in the direction of pedestrian travel unless otherwise shown in the plans.

Prestressed or Composite Panels are installed in fresh concrete, Paver Bricks require mortar bed and mortar sand, see KDOT's Standard Specifications for information.

All work and materials needed to install detectable warnings will be paid for under the bid item "Sidewalk Ramps (Detectable Warning)".

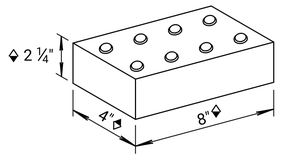


TRUNCATED DOME DIMENSIONS for SQUARE PATTERN (Parallel Alignment)

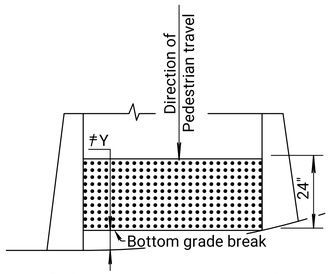


TYPICAL SECTION OF PAVER BRICK
SECTION A-A

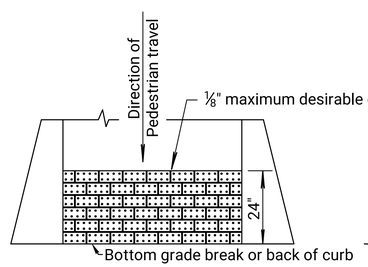
♦ These dimensions are nominal.



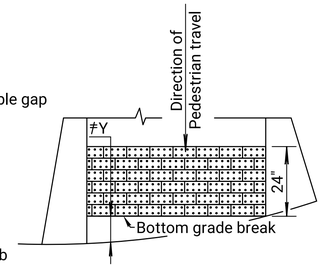
ϒ PAVER BRICK WITH TRUNCATED DOME SURFACE



⊗ CURB RADIUS DETAILS
Cut Prestressed Ramp Panels to fit.



STRAIGHT CURB DETAILS

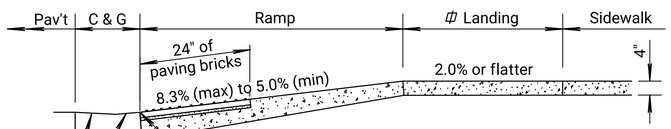


CURB RADIUS DETAILS

Installation shown for paving brick is running bond, use of other patterns is allowed with Engineer approval. Rotation 90° of Running Bond pattern is allowed to reduce space between bricks on curb radius installation, keep this space to a minimum. Place truncated domes on bricks in parallel alignment to pedestrian travel as shown.

⊗ Curb radius or greater than 5' ramp width will require more than one panel as approved by the Engineer. Limit number of panels installed at each site. Layouts shown are for example and may vary in the field.

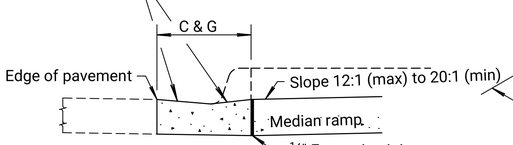
ϒ Acceptable with no mixing of types within an installation.



SECTION B-B

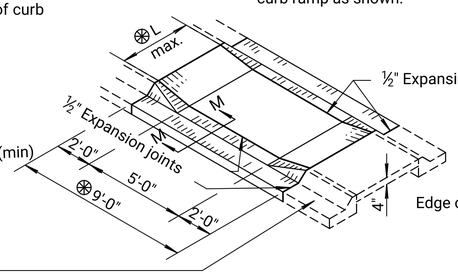
⊛ Median ramp crossing limits will be paid for as "Sidewalk Ramp."

✳ Transition Combined Curb & Gutter Type III (AE) through curb ramp as shown.



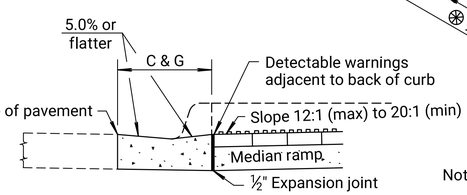
SECTION M-M

✳ Combined Curb & Gutter Type III (AE) unless shown otherwise on plans.

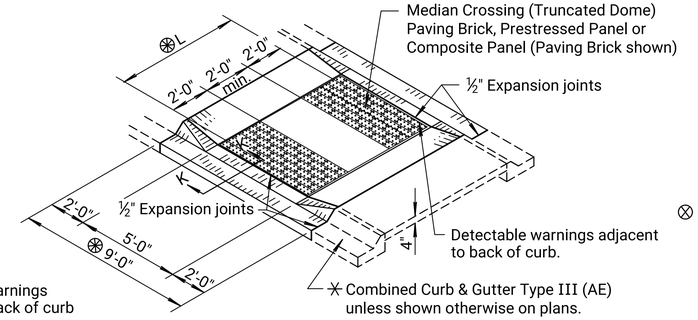


NARROW MEDIAN RAMP CROSSING
(L < 6'-0")

Note: A Median Ramp Crossing shall be constructed at Crosswalk locations. Do not install detectable warnings on narrow median ramp crossings.

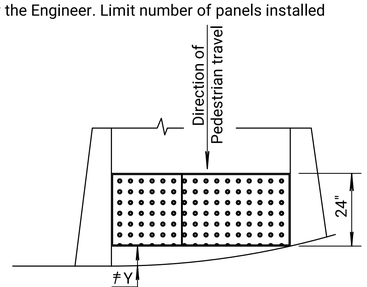


SECTION K-K



WIDE MEDIAN RAMP CROSSING
(L ≥ 6'-0")

Note: A Median Ramp Crossing shall be constructed at Crosswalk locations. Wider median islands will result in a 2' minimum gap between the detectable warning areas.



⊗ CURB RADIUS DETAILS (COMPOSITE)

Where truncated domes are placed through a curb radius, cut radius from 3'-0" long composite panel.

NO.	DATE	REVISIONS	BY	APP'D
5	2-23-17	Rev. Gen. Note & Panel Det.	T.T.R.	S.W.K.
4	2-10-10	Added Composite Panel	S.W.K.	J.O.B.
3	8-15-05	Added Prestressed Ramp Panel alt.	S.W.K.	J.O.B.
2	2-24-05	Class to Grade conc., wire reinf.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

AUXILIARY DETAILS FOR SIDEWALK & STEPS

RD725A

FHWA APPROVAL	3-7-17	APP'D.	SCOTT W. KING
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.

KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

Plotted 29-MAR-2018 16:25

Drawn By : arockers
File : working_rd725a.dgn

20-1374M					
	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	36-74 KA-5433-01	2021	16	52

BG CONSULTANTS
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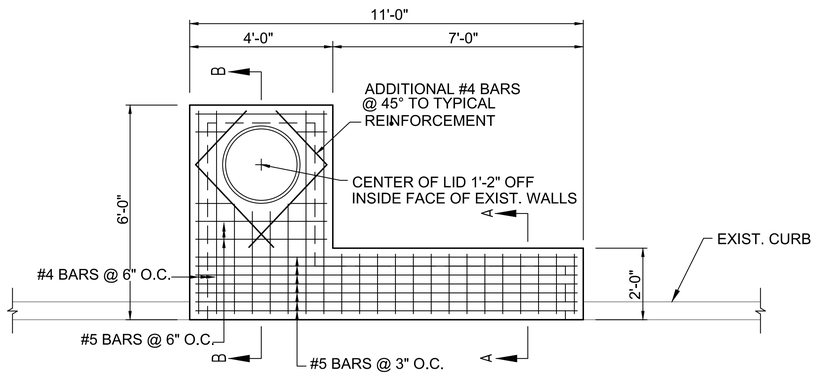
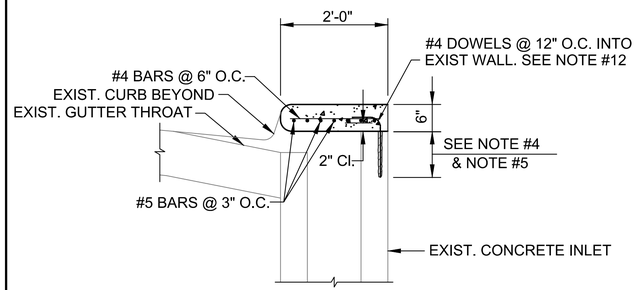


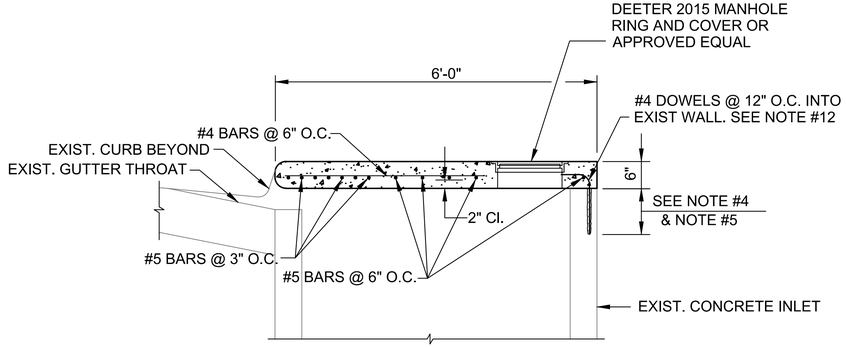
PLAN
SCALE 1/2" = 1'-0"

NOTES

1. CONCRETE FOR INLET BOX TOP SHALL BE A 4,000 PSI (28-DAY) AIR-ENTRAINED, PORTLAND CEMENT CONCRETE MIX. AIR ENTRAINMENT SHALL BE 5% TO 7%
2. ALL REINFORCED CONCRETE SHALL BE MECHANICALLY VIBRATED DURING PLACEMENT. PROPER METHODS SHALL BE APPLIED TO AVOID AGGREGATE SEGREGATION.
3. REINFORCING BARS SHALL BE DEFORMED, GRADE 60 AND SHALL MEET ASTM A 615 SPECIFICATIONS.
4. PLACEMENT OF REINFORCEMENT SHALL COMPLY WITH ACI 318, INCLUDING EMBEDMENT, LAP LENGTHS, BAR SUPPORTS AND MINIMUM CONCRETE COVER.
5. ALL REINFORCING STEEL DOWELED INTO EXISTING SHALL BE SET WITH EPOXY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
6. REMOVAL & RECONSTRUCTION OF INLET TOP SHALL BE PAID FOR AS "ADJUSTMENT OF CURB INLETS." EACH. UNIT PRICE SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS & INCIDENTALS NECESSARY TO REMOVE & RECONSTRUCT INLET TOP.



TYPICAL SECTION A-A
SCALE 3/4" = 1'-0"



TYPICAL SECTION B-B
SCALE 3/4" = 1'-0"

INLET BOX TOP

BG Project #20-1374M

CITY OF PHILLIPSBURG, KANSAS

INLET TOP DETAILS

20-1374M				
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	17	52

BG CONSULTANTS
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LEGEND

- Proposed Concrete
- Remove Exist. Pvm't.
- Proposed 8" Waterline
- Plug Abandoned Waterline
- Fire Hydrant Assembly
- Gate Valve & Valve Box
- Reducer

Sta. 55+49.40, BEGIN 8" Waterline
Connect to existing 8" Waterline (W),
Install 8" 90° Bend, Plug existing 8" Waterline (E)
Install 32 L.F. 8" Waterline (S)
N: 5,351.779 E: 4,315.045

FIFTH STREET

Exist. R/W

STA. 56+32.10, 84, LT.
Install 6" Gate Valve and Box,
Bore 84 L.F. 6" Water Line (S),
N: 5,401.869 E: 4,397.575

Exist. R/W

56+00 57+00 STATE STREET (US-36 HWY) 58+00 59+00

Match Line @ Sta. 59+50

Proposed 8" Waterline

Exist. R/W

STA. 56+58.88,
Install 8" 11.25° Bend
N: 5,324.226 E: 4,423.940

Exist. R/W

Sta. 58+20.31,
Install 1" Service Assembly, Bore 1" HDPE Service Line (N) to Existing Meter Pit (87 L.F.), and Connect to Existing Service Line in R/W (N).
N: 5,323.844 E: 4,585.365

STA. 55+49.57,
Install 8"x8" Tee,
Install 8" Gate Valve and Box (W)
Install 6 L.F. 8" Waterline (W)
Install 8" Plug (W)
N: 5,320.149 E: 4,315.045

STA. 55+53.99,
Install Fire Hydrant Setting (N),
Install 6 L.F. of 6" Waterline (N),
Salvage Existing Fire Hydrant to Owner.
See Sheet 21
N. 5,320.149 E. 4,319.460

STA. 56+32.10,
Install 8" x 6" Cross, 2 x 8" Gate Valve and Box (E)/(W), Install 8" 11.25° Bend (E), Install 6" Gate Valve and Box (S), 6"x4" Reducer (S), 2 x 4" 45° Bend (S), Install 9 L.F. 6" Water Line (S), Install 9 L.F. 4" Waterline (S), Connect to Existing 4" Waterline (SW). Plug Existing 4" Waterline (SW). Depth unknown, field verify and adjust at no additional cost to Owner.
N: 5,319.978 E: 4,397.575

Sta. 58+05.54,
Install 1" Service Assembly, Bore 1" HDPE Service Line (N) to Existing Meter Pit (88 L.F.), and Connect to Existing Service Line in R/W (N).
N: 5,323.878 E: 4,570.600

ID #	Phillipsburg Hwy 36 - CCLIP Watermain (For Information Only)		
001	ITEM	QUANTITY	UNIT
002	8" PVC (Open Trench)	862	Lin. Ft.
003	6" PVC (Open Trench)	6	Lin. Ft.
004	6" RJPVC (Directional Bore)	164	Lin. Ft.
005	4" RJPVC (Directional Bore)	48	Lin. Ft.
006	8" Gate Valve & Box	5	Each
007	6" Gate Valve & Box	4	Each
008	8" x 6" Cross	2	Each
009	8" x 8" Tee	1	Each
010	8" 90° Bend	1	Each
011	8" 11.25° Bend	4	Each
012	6" x 4" Reducer	3	Each
013	4" 45° Bend	6	Each
014	5-1/4" Fire Hydrant	1	Each
015	8" Watermain Connection (Existing)	2	Each
016	4" Watermain Connection (Existing)	3	Each
017	Connect to Existing Service	4	Each
018	1" HDPE Service Line	260	Lin. Ft.
019	Plug Existing Waterline 8"	3	Each
020	Plug Existing Waterline 4"	3	Each
021	Salvage Fire Hydrant	1	Each
022	Tracer Wire	1340	Lin. Ft.
023	Waterline Disinfection	Lump Sum	
024	Waterline Pressure Testing	Lump Sum	

Note: For Waterline Sidewalk Quantities See Sheet 22

SCALE: 1" = 20'
20' 0 20' 40'

PLAN: Lat. & Long.
PROFILE: Horiz. same as above Vert.

INSTALL 425 LIN. FT.
8" WATERLINE

Existing Ground Line

4' MIN. BURY

Profile Grade Proposed 8" Waterline

Match Line @ Sta. 59+50

+43.55, BEGIN 8" Waterline
Connect to existing 8" Waterline (W), Install 8" 90° Bend

+53.99,
Install 8" x 6" Tee, Install 8" Gate Valve and Box (W)

+32.10,
Install 8" x 4" Cross, Install 8" Gate Valve and Box (W), 8" Gate Valve and Box (E)

EXISTING UTILITY
EXISTING UTILITY

+35.10,
Install 11.25° Bend

+58.88,
Install 11.25° Bend

+05.54,
Service

+20.31,
Service

+84.35,
Service

1940 1935 1930 1925 1920 1915 1910 1905

55+25 56+00 57+00 58+00 59+00 60+00

Base Bid

CITY OF PHILLIPSBURG, KANSAS
STATE STREET (US-36 HIGHWAY)
WATERLINE PLAN & PROFILE
STA. 55+49.40 TO STA. 59+50

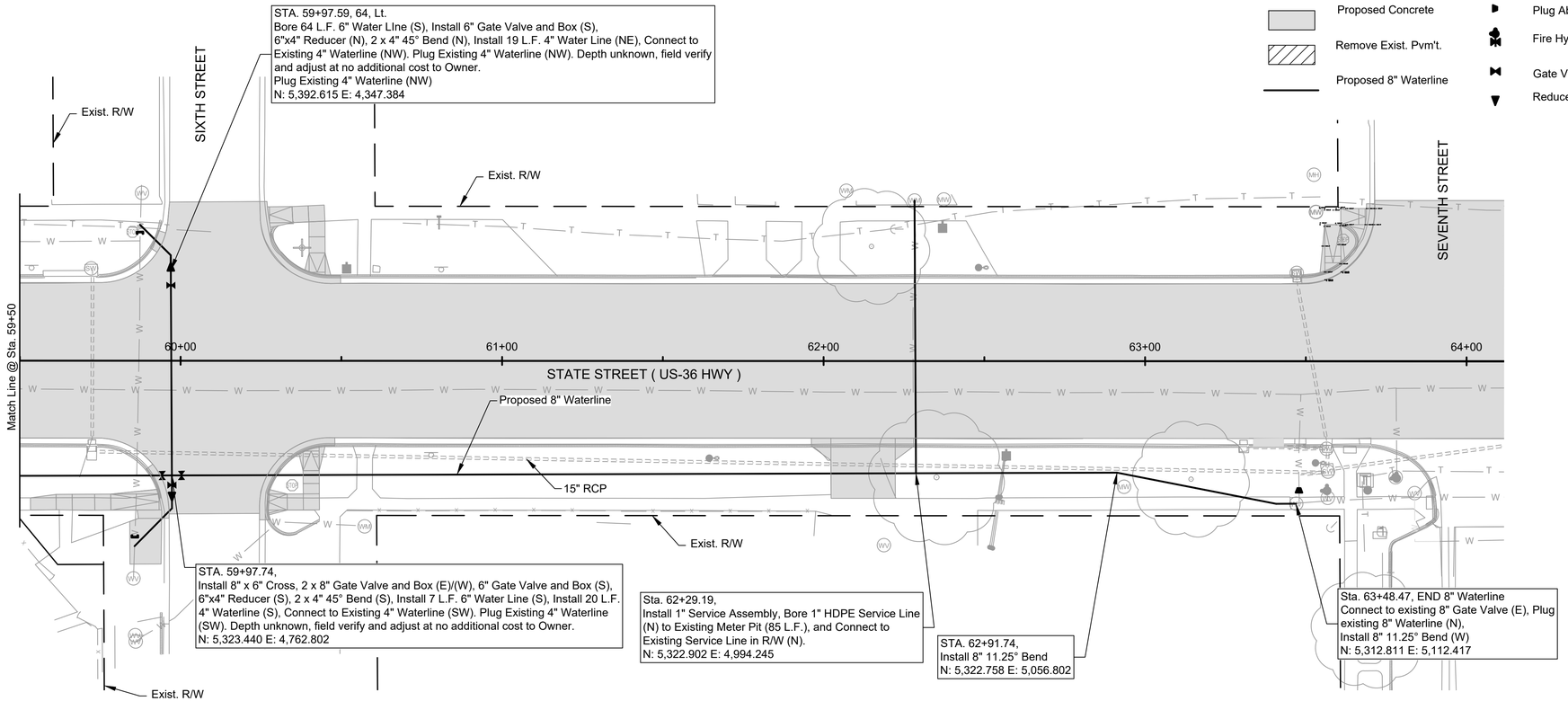
BG Project #20-1374M

20-1374M				
STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	18	52

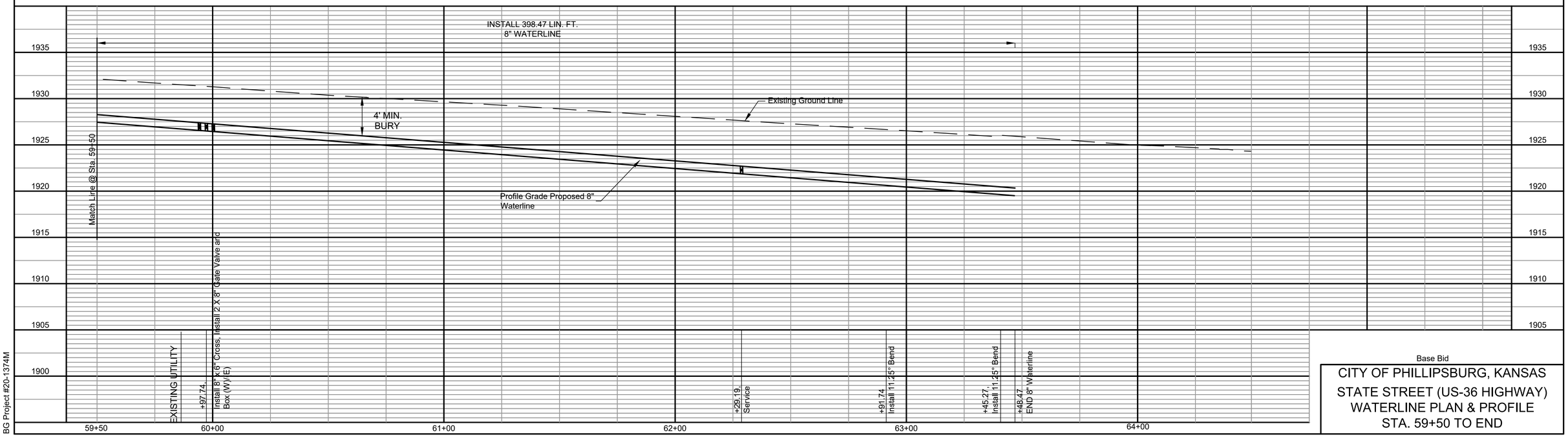
BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

LEGEND

- Proposed Concrete
- Remove Exist. Pvm't.
- Proposed 8" Waterline
- Plug Abandoned Waterline
- Fire Hydrant Assembly
- Gate Valve & Valve Box
- Reducer



PLAN: Lat. & Long.
PROFILE: Horiz. same as above
Vert.
SCALE: 1" = 20'

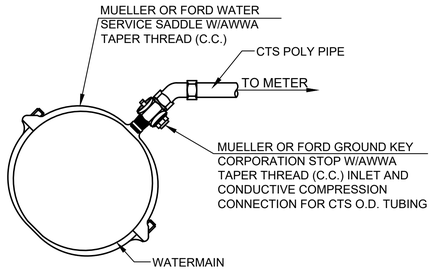


Base Bid

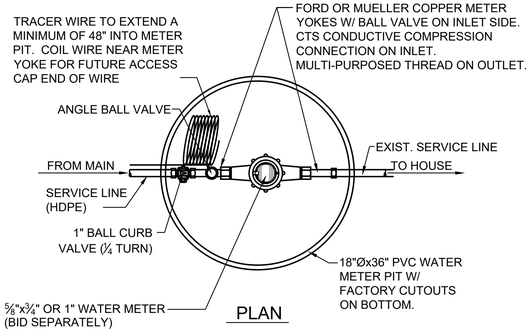
CITY OF PHILLIPSBURG, KANSAS
STATE STREET (US-36 HIGHWAY)
WATERLINE PLAN & PROFILE
STA. 59+50 TO END

BG Project #20-1374M

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

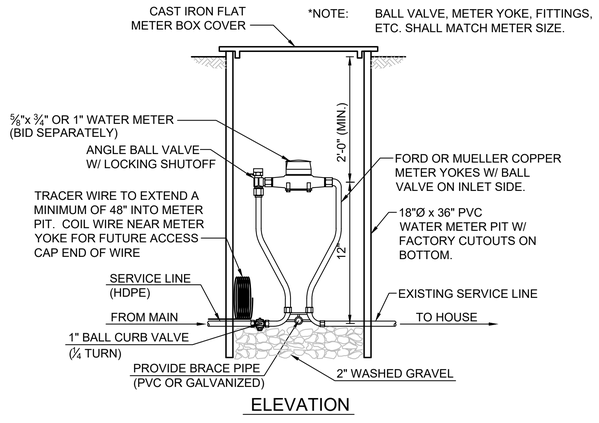


SERVICE ASSEMBLY (TYPICAL)
NOT TO SCALE



PLAN

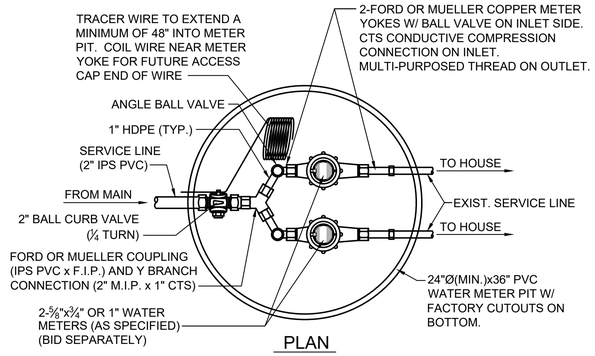
⅝"x¾" AND 1" WATER METER PIT DETAIL (STANDARD)
NOT TO SCALE



ELEVATION

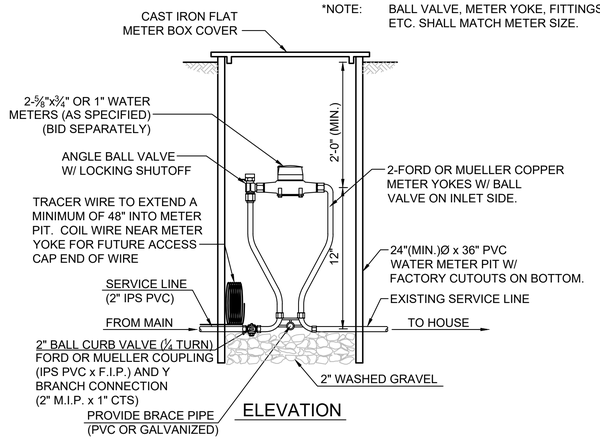
⅝"x¾" AND 1" WATER METER PIT DETAIL (STANDARD)
NOT TO SCALE

NOTE: BID ITEMS FOR RCP METER PITS SHALL INCLUDE REINFORCED CONCRETE PIPE SECTION AND H-20 RATED CAST IRON FLAT METER PIT COVER. REINFORCED CONCRETE PIPE SECTIONS SHALL BE CLASS II OR BETTER AND CONFORM TO THE REQUIREMENTS OF ASTM C76.



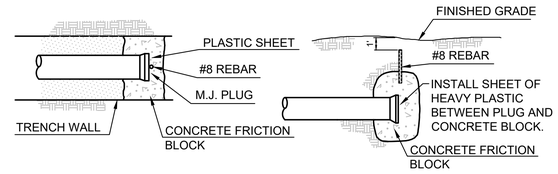
PLAN

DOUBLE WATER METER PIT DETAIL
NOT TO SCALE



ELEVATION

DOUBLE WATER METER PIT DETAIL
NOT TO SCALE



PLAN ELEVATION

LINE PLUG & FRICTION BLOCK DETAIL
NOT TO SCALE

Base Bid

CITY OF PHILLIPSBURG, KANSAS

STATE STREET (US-36 HIGHWAY)
WATERLINE DETAILS (1 OF 3)

BG Project #20-1374M

20-1374M				
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	20	52

BG CONSULTANTS
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THRUST BLOCK BEARING AREA

PIPE SIZE	90° BEND	45° BEND	22½° BEND	11¼° BEND	TEE
4"	2 Sq. Ft.	1 Sq. Ft.	1 Sq. Ft.	1 Sq. Ft.	1 Sq. Ft.
6"	3 Sq. Ft.	2 Sq. Ft.	1 Sq. Ft.	1 Sq. Ft.	2 Sq. Ft.
8"	5 Sq. Ft.	3 Sq. Ft.	2 Sq. Ft.	1 Sq. Ft.	3 Sq. Ft.
10"	7 Sq. Ft.	4 Sq. Ft.	2 Sq. Ft.	2 Sq. Ft.	5 Sq. Ft.
12"	12 Sq. Ft.	7 Sq. Ft.	4 Sq. Ft.	3 Sq. Ft.	8 Sq. Ft.

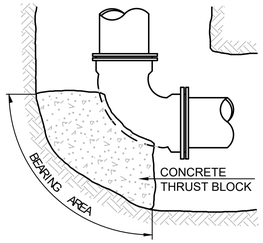
BLOCKING OF TEES IS TO BE PLACED OPPOSITE THE BRANCH & AREA IS BASED ON BRANCH SIZE. ALL MATERIAL, LABOR, AND EQUIPMENT REQUIRED TO CONSTRUCT CONCRETE THRUST BLOCKS SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK.

VERTICAL CHANGE ANCHORS

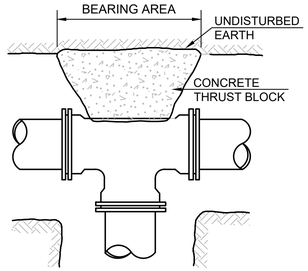
PIPE SIZE	90° BEND		45° BEND		22½° BEND		11¼° BEND	
	CONCRETE NO.		CONCRETE NO.		CONCRETE NO.		CONCRETE NO.	
	C.Y.	BAR	C.Y.	BAR	C.Y.	BAR	C.Y.	BAR
6"	2.0	2	1.0	1	1.0	1	1.0	1
8"	3.5	4	2.0	2	1.0	1	1.0	1
10"	5.5	6	3.0	3	1.5	2	1.0	1
12"	8.0	8	4.5	5	2.5	3	2.0	2

THE CONCRETE AND STEEL REQUIRED FOR ALL FITTINGS NOT LISTED SHALL BE THE SAME AMOUNT AS REQUIRED FOR THE 22½° BENDS. CONCRETE AND STEEL ARE SUBSIDIARY TO OTHER ITEMS OF WORK. THE SPACING FOR MULTIPLE REBAR ANCHORS SHALL BE 2" C-C

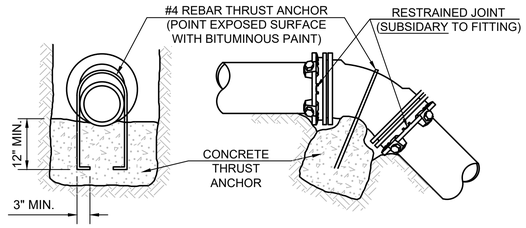
THE TERM "REACTION BLOCK", USED THROUGHOUT THE PLANS IS THE SAME AS THE TERM "THRUST BLOCK".



TYPICAL BEND

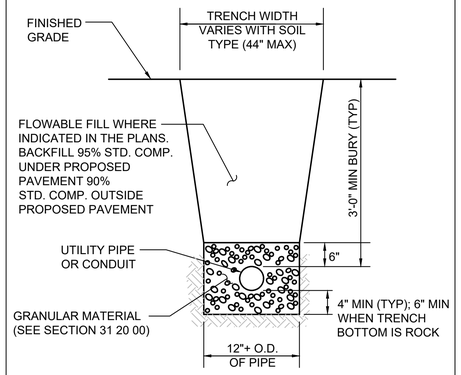


STANDARD TEE



SECTION ELEVATION

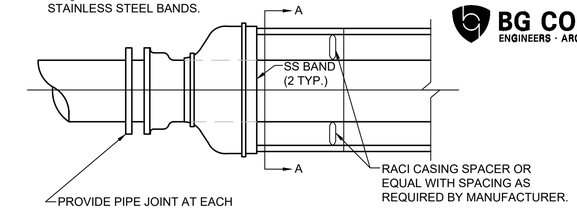
VERTICAL CHANGE IN DIRECTION



TRENCH BACKFILL AND EMBEDMENT DETAIL (TYPICAL)

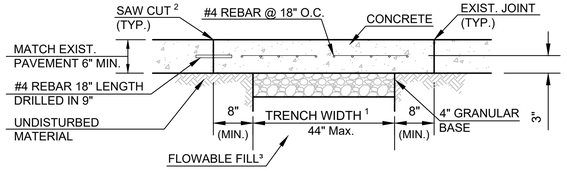
NOT TO SCALE

NOTE: INSTALL SINGLE PIECE PULL OVER END SEAL AT EACH END OF BORE TO KEEP DEBRIS OUT OF CASING PIPE. END SEAL SHALL BE ⅛" THICK RUBBER WITH STAINLESS STEEL BANDS.



PIPE CASING-END SEAL DETAIL

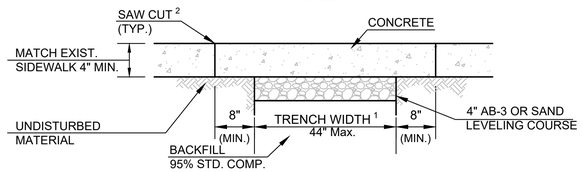
NOT TO SCALE



NOTES: REBAR SHALL BE STAGGERED ON 36" CENTERS WITH A MIN. OF 2 BARS PER SIDE. DOWELS WILL NOT BE REQUIRED AT EXIST JOINTS.
CONCRETE SHALL BE FINISHED WITH ⅜" EDGER AND ALL JOINTS SHALL BE SEALED. CONCRETE PATCH WILL BE REQUIRED IN DRIVEWAY SECTIONS.

REMOVE AND REPLACE SURFACING (CONCRETE)

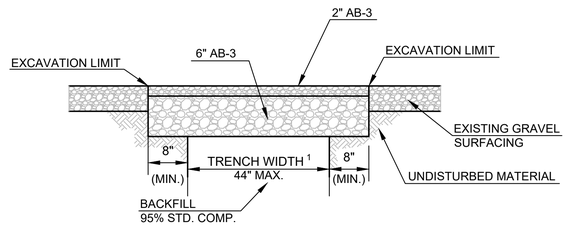
NOT TO SCALE



NOTES: CONCRETE SHALL BE FINISHED WITH ⅜" EDGER. SIDEWALK PATCHES WILL NOT BE ALLOWED IN DRIVEWAYS SECTIONS.

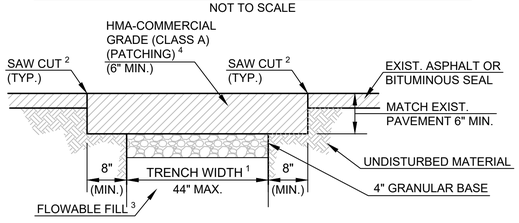
REMOVE AND REPLACE SURFACING (CONCRETE SIDEWALK)

NOT TO SCALE



REMOVE AND REPLACE SURFACING (GRAVEL)

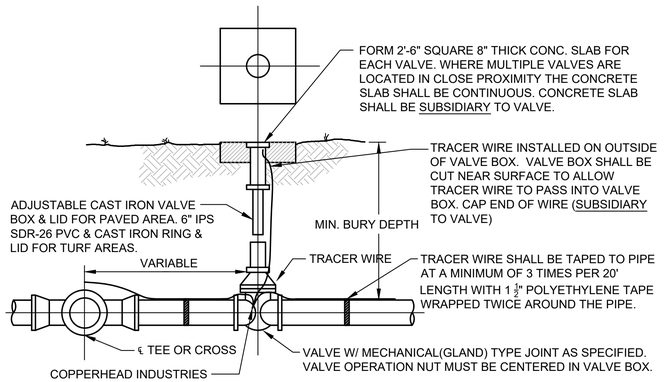
NOT TO SCALE



REMOVE AND REPLACE SURFACING (ASPHALT)

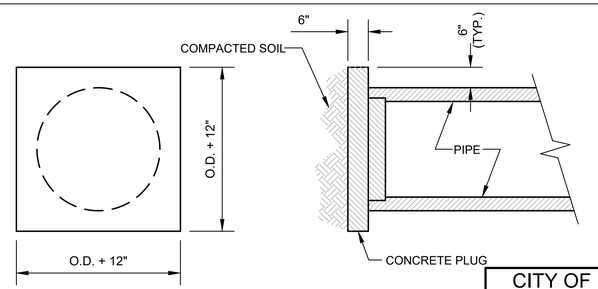
NOT TO SCALE

1. REPLACE SURFACING (IN KIND) IS FIGURED WITH 44" MAX. TRENCH + 16" OF EXIST. PAVEMENT REMOVAL.
2. SAW CUT SHALL BE FULL DEPTH AND SMOOTH (SUBSIDIARY). INITIAL PAVEMENT SAW CUT CAN BE CUT BY A ROCK SAW.
3. FLOWABLE FILL SHALL BE PLACED FROM THE TOP OF THE GRANULAR PIPE BEDDING TO THE BOTTOM OF THE PROPOSED PAVEMENT WHERE NOTED IN THE PLANS. THE AB-3 BASE SHALL NOT BE PLACED WHERE FLOWABLE FILL IS UTILIZED.
4. ALL SURFACING NOTED FOR ASPHALT REPLACEMENT SHALL BE REPLACED WITH SPECIFIED ASPHALT. CONCRETE SHALL NOT BE USED IN PLACE OF ASPHALT IN THESE AREAS.



VALVE & BOX DETAIL

NOT TO SCALE



CONCRETE PLUG FOR ABANDONMENT OF EXIST. PIPES

NOT TO SCALE

Base Bid

CITY OF PHILLIPSBURG, KANSAS

STATE STREET (US-36 HIGHWAY)
WATERLINE DETAILS (2 OF 3)

BG Project #20-1374M

20-1374M					
	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	36-74 KA-5433-01	2021	21	52

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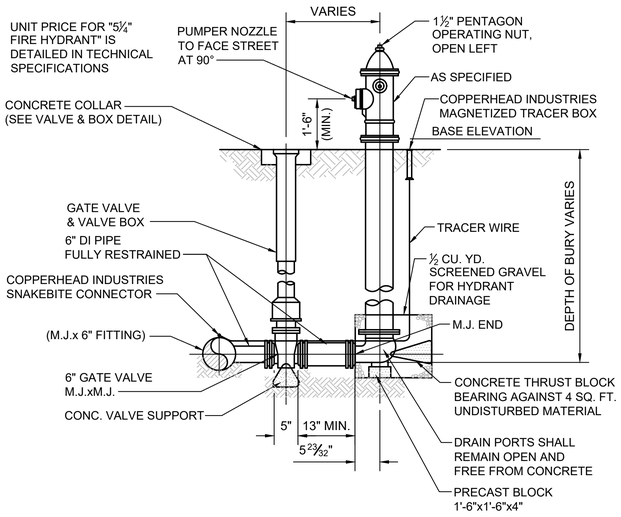
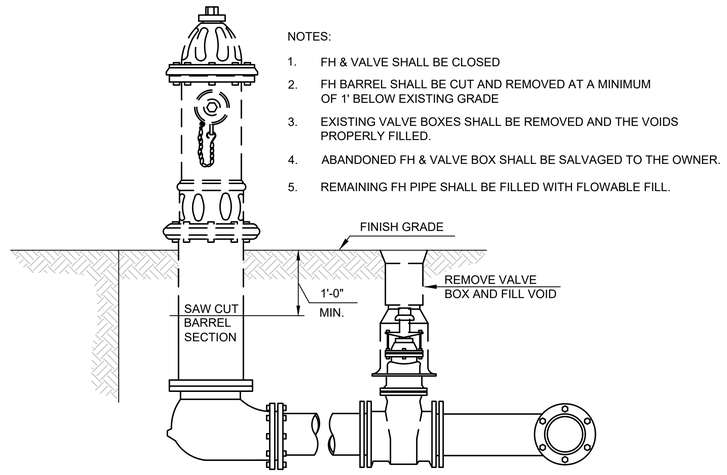


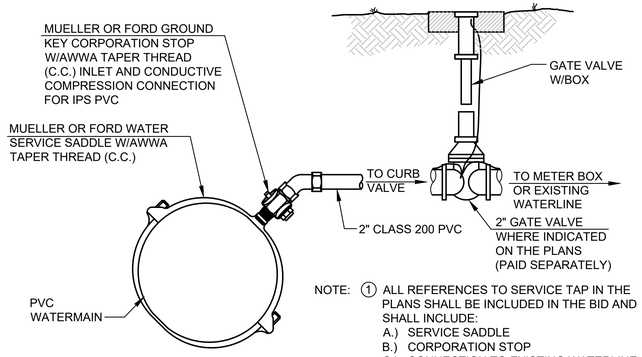
5 ¼" FIRE HYDRANT SETTING (TYPICAL)

NOT TO SCALE



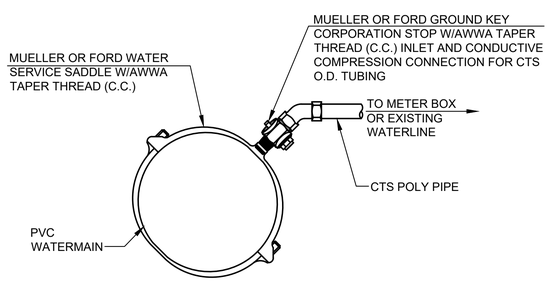
ABANDON IN PLACE EXISTING FIRE HYDRANT DETAIL

NOT TO SCALE



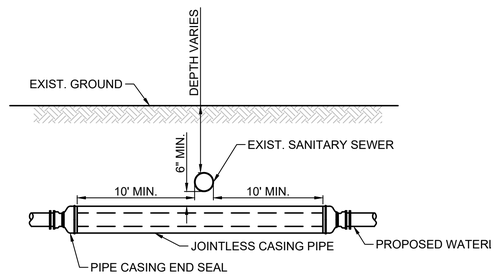
2"SERVICE TAP

NOT TO SCALE



1" SERVICE TAP

NOT TO SCALE



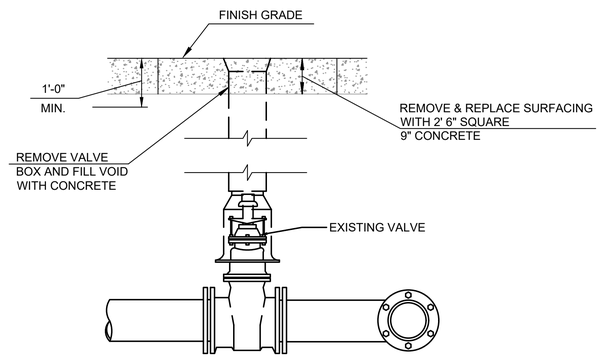
NOTES: 1. CASING PIPE SHALL BE ONE CONTINUOUS LENGTH OF PIPE. PIPE MATERIAL SHALL BE AS LISTED IN THE SPECIFICATIONS.
2. CASING PIPE SHALL EXTEND TO MINIMUM OF 10' IN BOTH DIRECTIONS FROM OUTSIDE EDGE OF EXISTING SANITARY SEWER.
3. REFER TO TRENCH BACKFILL AND EMBEDMENT DETAIL FOR PROPER PIPE BEDDING.

SEWER CROSSING DETAIL
(WHEN LESS THAN 2'-0" VERTICAL CLEARANCE)

NOT TO SCALE

GENERAL NOTES

1. ALL LABOR, MATERIALS, AND INCIDENTALS, REQUIRED FOR CONSTRUCTION OF WATER SYSTEM IMPROVEMENTS SHALL BE PAID FOR AS "WATER SYSTEM (LUMP SUM)"
2. CONSTRUCTION LIMITS: THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO WITHIN THE RIGHT-OF-WAY OR EASEMENTS AS SHOWN ON THE PLANS. REPLACEMENT OF LOT PINS OR BOUNDARY MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, SHOULD HE DISTURB THEM. ADDITIONAL PRIVATE PROPERTY REQUIRED FOR STORAGE OF MATERIALS OR OTHER OPERATIONS SHALL BE USED ONLY WITH WRITTEN PERMISSION OF THE LANDOWNER.
3. WHERE TREES ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE PROPERLY REMOVED ONLY AT THE DIRECTION OF THE OWNER AND ENGINEER. THERE SHALL BE NO SEPARATE PAYMENT FOR REMOVAL OF TREES, BUT WILL BE PAID AS "CLEARING AND GRUBBING".
4. QUANTITIES FOR THE PAVEMENT PATCHING BID ITEMS ARE BASED ON A 5' WIDE REPLACEMENT WIDTH AND PAID FOR BY THE SQUARE YARD. ADDITIONAL PAYMENT WILL NOT BE MADE OUTSIDE THE LIMITS SHOWN ON THE PLANS, UNLESS DIRECTED BY THE ENGINEER.
5. THE CONTRACTOR SHALL HAVE THE OPTION OF BORING ANY HARD SURFACE SUCH AS DRIVEWAYS WHICH MAY BE NOTED FOR REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE OWNER. THE PLAN QUANTITY OF SURFACING SHALL BE PAID FOR THESE AREAS.
6. MATERIAL TO BE DISPOSED OF SHALL BE WASTED OFF SITE, ON SITES PROVIDED BY THE CONTRACTOR. CITY WILL REMOVE SALVAGED ITEMS FROM THE PROJECT SITE.
7. ALL EXISTING WATER SYSTEM APPURTENANCE AND OTHER SALVAGEABLE ITEMS SHALL REMAIN THE PROPERTY OF THE OWNER.
8. ONLY AUTHORIZED EMPLOYEES OF THE CITY OF PHILLIPSBURG SHALL OPERATE EXISTING VALVES.
9. THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE WITHOUT DISRUPTION OF WATER SERVICE TO CUSTOMERS UNTIL CONNECTIONS ARE READY TO BE MADE.
10. INDIVIDUAL DETAILED NOTICES OF ACCESS RESTRICTIONS SHALL BE DELIVERED 48 HOURS PRIOR TO CONSTRUCTION. 24 HOUR NOTICE SHALL BE GIVEN TO WATER CUSTOMERS PRIOR TO INTERRUPTION OF SERVICE FOR MAKING SERVICE CONNECTIONS. ONCE A WATER SERVICE IS INTERRUPTED THE CONTRACTOR SHALL WORK CONTINUOUSLY UNTIL SERVICE IS RESTORED.
11. CONTRACTOR SHALL NOT PLACE EXCAVATION SPOILS ON ANY DRIVING SURFACE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER. MATERIALS STOCKPILED OR SPOILS PLACED ON A DRIVING SURFACE SHALL BE REMOVED AT THE END OF THE DAY'S CONSTRUCTION AND ANY DAMAGE CAUSED TO THE DRIVING SURFACE SHALL BE REPAIRED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AND SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.
12. THE CONTRACTOR SHALL FINISH GRADE AND RESTORE DISTURBED AREAS IN EACH SECTION OF CONSTRUCTION PRIOR TO OR CONCURRENT WITH CONSTRUCTION OF OTHER IMPROVEMENTS. ALL DISTURBED AREAS SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO KDOT SPECIFICATIONS, PRIOR TO THE END OF THE DESIGNATED SEEDING SEASON.
13. ALL NEWLY CONSTRUCTED WATERMAIN AND SERVICE LINE SHALL BE TESTED AND DISINFECTED AS SPECIFIED AND TRACER WIRE SHALL BE INSTALLED ON ALL UNDERGROUND PIPING, INCLUDING SERVICE LINES.
14. ALL 3" DIAMETER AND LARGER FITTINGS SHALL BE DUCTILE IRON AS SPECIFIED. ALL FITTINGS LESS THAN 3" IN DIAMETER SHALL BE PVC AS SPECIFIED.
15. ABANDONMENT OF EXISTING WATERLINES, HYDRANTS, VALVES, ETC. SHALL BE SUBSIDIARY TO OTHER BID ITEMS UNLESS NOTED OTHERWISE ON THE PLANS. LEAVE ON SITE AT OWNER DESIGNATED LOCATION.



ABANDON IN PLACE EXISTING VALVE IN BOX

NOT TO SCALE

NOTES:
1. VALVE SHALL BE CLOSED
2. EXISTING VALVE BOXES SHALL BE REMOVED AND THE VOIDS PROPERLY FILLED.
3. ABANDONED VALVE BOX SHALL BE SALVAGED TO THE OWNER.
4. ABANDONMENT OF EXISTING VALVES SUBSIDIARY TO WATER SYSTEM (LUMP SUM)

Base Bid

CITY OF PHILLIPSBURG, KANSAS

STATE STREET (US-36 HIGHWAY)
WATERLINE DETAILS (3 OF 3)

BG Project #20-1374M

20-1374M					
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	36-74 KA-5433-01	2021	22	52	

FOR WATER SYSTEM QUANTITIES, SEE SH. NO. 17
FOR EROSION CONTROL QUANTITIES, SEE SH. NO. 23/24
FOR SEEDING QUANTITIES, SEE SH. NO. 31/32
FOR PAVEMENT MARKING QUANTITIES, SEE SH. NO. 37
FOR TRAFFIC CONTROL QUANTITIES, SEE SH. NO. 49

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EARTHWORK

STATION TO STATION	EXCAVATION				COMPACTION		THRU CUTS NOT SUBGRADED	
	COMMON		ROCK (PAVEMENT REMOVAL)		TYPE AA MR-0-5	TYPE A MR-0-5	COMMON EXC.	TYPE AA ME-0-5
	CU. YDS.	VMF*	CU. YDS.	VMF	CU. UDS.	CU. YDS.	CU. YDS.	CU. YDS.
Additive Bid (Sta. 55+00 - Sta. 59+50)	298	0.80	961	1.0	0	0	0	0
Base Bid (Sta. 59+50 - Sta. 67+50)	473	0.80	1,671	1.0	0	0	0	0
TOTAL	771		2,632		0	0	0	0

*ASSUMED

ADJUSTMENT OF MANHOLES

LOCATION	SIDE	MANHOLE [EACH]	REMARKS
64+78.06	14.2' RT.	1	STORM SEWER
BASE BID TOTAL		1	

CONCRETE PAVEMENT (10" UNIFORM)(AE)(NRDJ)

LOCATION (STA. - STA.)		SIDE	LENGTH [LIN. FT.]	QUANTITY [SQ. YDS.]	REMARKS
ADDITIVE BID					
55+00.00	59+50.00	CL	450.0	2,579.8	MAINLINE
ADDITIVE BID TOTAL				2,579.8	
BASE BID					
59+50.00	67+50.00	CL	800.0	4,648.7	MAINLINE
BASE BID TOTAL				4,648.7	

GRANULAR BASE (6")

LOCATION (STA. - STA.)		SIDE	LENGTH [LIN. FT.]	QUANTITY [SQ. YDS.]	REMARKS
ADDITIVE BID					
55+00.00	59+50.00	CL	450.00	2,592.9	MAINLINE
ADDITIVE BID TOTAL				2,592.9	
BASE BID					
59+50.00	67+50.00	CL	800.00	4,719.1	MAINLINE
BASE BID TOTAL				4,719.1	

GEOSYNTHETIC REINFORCEMENT (FOR BASE)

LOCATION (STA. - STA.)		SIDE	LENGTH [LIN. FT.]	QUANTITY [SQ. YDS.]	REMARKS
ADDITIVE BID					
55+00.00	59+50.00	CL	450.0	2,592.9	MAINLINE
ADDITIVE BID TOTAL				2,592.9	
BASE BID					
59+50.00	67+50.00	CL	800.0	4,719.1	MAINLINE
BASE BID TOTAL				4,719.1	

PAVEMENT PATCHING QUANTITIES (WATERLINE)

LOCATION (STA. - STA.)		SIDE	LENGTH [LIN. FT.]	AREA [SQ. YDS.]	HMA-COMMERCIAL GRADE (CLASS A)(PATCHING) [TONS]	CONCRETE PAVEMENT (6" UNIFORM)(AE) [SQ. YDS.]	GRANULAR BASE (4") [SQ. YDS.]	REMARKS
BASE BID								
56+29.20	56+38.72	RT.	19.1	10.6	-	10.6	10.6	5TH ST. S CONNECTION
59+84.19	59+94.14	Rt.	31.5	17.5	-	17.5	17.5	6TH ST. S CONNECTION
BASE BID TOTAL				28.1	0.0	28.1	28.1	

CURB AND GUTTER, COMBINED (AE)

LOCATION (STA. - STA.)		SIDE	TYPE I [LIN. FT.]	TYPE II [LIN. FT.]	REMARKS
ADDITIVE BID					
55+54.65	55+78.59	Lt.	21.3	10.1	5TH ST. NW C&G
56+42.02	56+46.87	Rt.	3.0	5.0	5TH ST. SE C&G
56+42.42	56+45.88	Lt.	3.0	5.0	5TH ST. NE C&G
ADDITIVE BID TOTAL			27.3	20.1	
BASE BID					
55+47.01	55+78.66	Rt.	31.9	10.0	5TH St. SW WATERLINE
56+46.79	56+48.47	Rt.	3.4	0.0	5TH St. SE WATERLINE
59+89.88	59+92.85	Rt.	5.0	0.0	6TH St. SW WATERLINE
59+92.85	59+95.01	Rt.	3.7	7.7	6TH St. SW C&G
59+90.58	59+93.69	Lt.	5.9	0.0	6TH St. NW WATERLINE
60+26.37	60+48.00	Rt.	20.9	10.2	6TH St. SE C&G
60+27.53	60+31.19	Rt.	5.0	0.0	6TH St. SE WATERLINE
60+26.14	60+46.74	Lt.	25.6	11.8	6TH St. NE C&G
61+96.23	62+28.06	Rt.	11.8	20.0	COM. ENT. WATERLINE
63+33.64	63+43.18	Rt.	9.5	0.0	REPLACE C&G
63+48.73	63+69.93	Lt.	21.7	12.3	7TH St. NW C&G
64+33.77	64+44.57	Lt.	6.0	5.3	7TH St. NE C&G
67+55.23	67+76.54	Rt.	25.6	0.0	REPLACE C&G
BASE BID TOTAL			176.0	77.3	

FLOWABLE FILL (LOW STRENGTH) (WATERLINE)

LOCATION (STA. - STA.)		SIDE	QUANTITY [CU. YDS.]
BASE BID			
55+49.51	55+49.59	RT.	5.2
55+76.25	56+47.61	Rt.	16.1
56+48.23	56+35.64	Lt.	22.8
59+91.20	60+30.21	Rt.	8.8
59+92.67	59+94.53	Lt.	20.4
62+02.75	62+22.75	Rt.	4.5
BASE BID TOTAL			77.8

SIDEWALK RAMP

LOCATION (STA. - STA.)		SIDE	AREA [SQ. YDS.]	REMARKS
ADDITIVE BID				
55+57.64	55+76.36	Lt.	14.5	5TH ST. NW
56+45.35	56+56.35	Lt.	6.1	5TH ST. NE
56+46.22	56+57.54	Rt.	8.0	5TH ST. SE
ADDITIVE BID TOTAL			28.6	
BASE BID				
55+43.68	55+76.28	Rt.	13.1	5TH ST. SW
59+78.29	59+93.29	Rt.	9.7	6TH ST. SW
60+26.99	60+46.74	Lt.	9.6	6TH ST. NE
60+27.01	60+45.10	Rt.	9.5	6TH ST. SE
63+55.03	63+68.84	Lt.	13.9	7TH ST. NW
64+36.56	64+41.62	Lt.	8.5	7TH ST. NE
BASE BID TOTAL			64.3	

SIDEWALK CONSTRUCTION (4")(AE)

LOCATION (STA. - STA.)		SIDE	AREA [SQ. YDS.]	REMARKS
ADDITIVE BID				
55+56.15	55+76.36	Lt.	7.9	5TH ST. NW
56+56.35	56+61.35	Lt.	2.8	5TH ST. NE
56+57.56	56+67.54	Rt.	5.2	5TH ST. SE
ADDITIVE BID TOTAL			15.9	
BASE BID				
55+43.68	55+76.28	Rt.	44.2	5TH St. SW
59+44.33	59+78.29	Rt.	30.6	6TH St. SW
60+34.89	60+44.94	Lt.	11.0	6TH St. NE
60+33.21	60+43.14	Rt.	9.6	6TH St. SE
63+54.40	63+68.08	Lt.	5.6	7TH St. NW
64+36.62	64+41.62	Lt.	2.8	7TH St. NE
BASE BID TOTAL			103.8	

SIDE WALK RAMP (DETECTABLE WARNING)

LOCATION	SIDE	AREA [SQ.YDS.]	REMARKS
BASE BID			
64+26.84	Lt.	1.1	7TH ST. NE
BASE BID TOTAL		1.1	

CONCRETE PAVEMENT (8" UNIFORM)(AE)

LOCATION (STA. - STA.)		SIDE	QUANTITY [SQ. YDS.]	REMARKS
BASE BID				
61+96.23	62+28.06	RT.	47.8	COM. ENT. WATERLINE
BASE BID TOTAL			47.8	

SIGN (REMOVE AND RESET)

LOCATION	SIDE	QUANTITY [L.S.]	REMARKS
ADDITIVE BID			
55+63.63	Lt.	1	STOP SIGN
ADDITIVE BID TOTAL		1	
BASE BID			
63+62.11	Lt.	1	STOP SIGN
BASE BID TOTAL		1	

RECAPITULATION OF ROAD QUANTITIES

BASE BID		
ITEM	QUANTITY	UNIT
Contractor Construction Staking	Lump Sum	L.S
Field Office and Laboratory (Type A)	Lump Sum	L.S
Mobilization	Lump Sum	L.S
Mobilization (DBE)	Lump Sum	L.S
Common Excavation (Urb)	473	Cu. Yds.
Rock Excavation	1,671	Cu. Yds.
Adjustment of Manholes	1	Each
Adjustment of Curb Inlets	1	Each
Curb and Gutter, Combined (AE)	253	Lin. Ft.
Sidewalk Construction (4")(AE)	104	Sq. Yds.
Sidewalk Ramp	64	Sq. Yds.
Concrete Pavement (8" Uniform)(AE)	48	Sq. Yds.
Concrete Pavement (10" Uniform)(AE)(NRDJ)	4,649	Sq. Yds.
Granular Base (6")	4,719	Sq. Yds.
Water (Granular Base)(Set Price)	1	M. Gal.
Sidewalk Ramp (Detectable Warning)	1	Sq. Yds.
Flowable Fill (Low Strength)	78	Cu. Yds.
Temporary Surfacing Material (Aggregate)(Set Price)	1	Cu. Yds.
Granular Base (4")	28	Sq. Yds.
Geosynthetic Reinforcement (For Base)	4,719	Sq. Yds.
Water System	1	L.S.
Sign (Remove and Reset)	1	L.S.
Concrete Core (Set Price)	1	Each
ADDITIVE BID		
ITEM	QUANTITY	UNIT
Contractor Construction Staking	Lump Sum	L.S.
Common Excavation (Urb)	298	Cu. Yds.
Rock Excavation	961	Cu. Yds.
Curb and Gutter, Combined (AE)	47	Lin. Ft.
Sidewalk Construction (4")(AE)	16	Sq. Yds.
Sidewalk Ramp	29	Sq. Yds.
Concrete Pavement (10" Uniform)(AE)(NRDJ)	2,580	Sq. Yds.
Granular Base (6")	2,593	Sq. Yds.
Sign (Remove and Reset)	1	L.S.

ADJUSTMENT OF CURB INLETS

LOCATION	SIDE	INLET [EACH]	REMARKS
BASE BID			
67+53.08	30.58' Rt.	1	REPLACE TOP
BASE BID TOTAL		1	

NO.	DATE	REVISIONS	BY	APP'D
2	1-14-08	Rem. Drainage Structure Summary	S.W.K.	J.O.B.
1	1-9-91	Detailed on CADD	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

RD050

FHWA APPROVAL	5-28-08	APP'D, James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED B.N.B.
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK. S.W.K.

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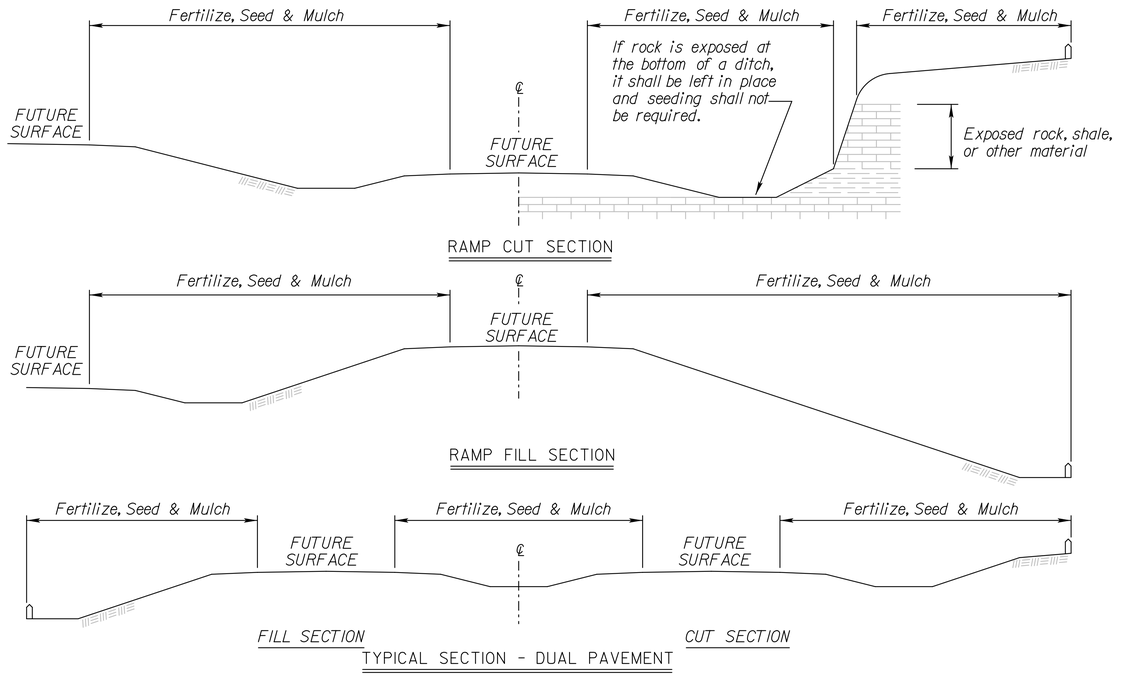
BG Project #20-1374M

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	23	52



FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P_2O_5, K_2O listed in Summary of Quantities will be acceptable.

- * - N = Nitrogen Rate of Application
- ** - P_2O_5 = Phosphorous Rate of Application
- *** - K_2O = Potassium Rate of Application

The Contractor will be required to finish areas of excavation, borrow and embankment in accordance with the specifications. Areas that require installation or construction of temporary water pollution control items will be finished in reasonable close conformity to the alignment, grade and cross section shown on the plans or as established by the Engineer.

CLT = Construction Limit Tract. This area is defined by the entire disturbed area of the project that requires seeding and erosion control measures to be placed. Any impervious areas (i.e. pavement, gravel, riprap, etc.) shall not be included in this measurement.

Slope = Defined by the area of the project that requires Class 1 erosion control material to be placed. This area shall be seeded using the Soil Erosion Mix prior to placement of the material. Drilling seed is preferred, however, broadcasting is acceptable if drilling is not possible.

Channel = Defined by the area of the project that requires Class 2 erosion control material to be placed. This area shall be seeded using the Soil Erosion Mix prior to placement of the material. Drilling seed is preferred, however, broadcasting is acceptable if drilling is not possible.

GENERAL NOTES

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded, and mulched. Soil preparation shall conform to the Standard Specifications.

Temporary seeding shall be done during any time of the year that the soil can be cultivated. After the temporary seeding has been completed on the entire project, permanent seeding shall be done during the normal seeding season.

MULCHING: Mulch shall be spread uniformly over all disturbed areas and punched in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching materials is generally as follows:

1¾ - 2¼ Tons per Acre = 1½" loose depth spread uniformly over acre.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.
Other vegetative mulches are acceptable only with the Engineer's concurrence.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

BASE BID

SUMMARY OF SEEDING / EROSION CONTROL QUANTITIES

P.L.S. RATE/ ACRE		ACRES		BID ITEM	QUANTITY	UNIT
CLT	SL/CH	CLT	SL/CH			
				Temporary Fertilizer (* - ** - ***)		LB
				Temporary Seed (Canada Wildrye)		LB
				Temporary Seed (Grain Oats)		LB
				Temporary Seed (Sterile Wheatgrass)		LB
				Soil Erosion Mix		LB
				Erosion Control (Class 1, Type Y)		SQ YD
				Erosion Control (Class 2, Type Y)		SQ YD
				Sediment Removal (Set Price)	1	CU YD
				Synthetic Sediment Barrier		LF
				Temporary Berm (Set Price)	1	LF
				Temporary Ditch Check (Rock)		CU YD
				Temporary Inlet Sediment Barrier		EACH
				Temporary Sediment Basin		CU YD
				Temporary Slope Drain		LF
				Temporary Stream Crossing		EACH
				Biodegradable Log (9")	313	LF
				Biodegradable Log (12")		LF
				Biodegradable Log (20")		LF
				Filter Sock (8")	120	LF
				Geotextile (Erosion Control)	10	SQ YD
				Silt Fence		LF
				SWPPP Design †	Lump Sum	LS
				SWPPP Inspection †	10	EACH
				Water Pollution Control Manager †	15	EACH
900 lbs / acre		.06		Mulch Tacking Slurry	58	LB
2 tons / acre		.06		Mulching		TON
				Water (Erosion Control) (Set Price)	1	MGAL

NOTE: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. See Permanent Seeding Summary of Seeding Quantities sheet LA850 for further details.

Geotextile (Erosion Control) shall be removed prior to placement of permanent slope protection.

Regreen and Quick Guard are the approved sterile wheatgrass products.

† If the total disturbed area of the project, not just the seeding area, is 1 acre or more, then these bid items must be included.

***** List size of material.*

The amount of mulch and mulch tacking slurry in the bid quantities is estimated. (Acres of Seeding X 1.5 X 2 Tons/Acre). The estimated quantity includes mulching associated with both temporary and permanent seeding operations. The total mulch and mulch tacking slurry required shall be determined in the field. The bid item for mulching and mulch tacking slurry shall be paid for according to the Standard Specifications.

Quantities for all erosion control items are estimated to give full flexibility for compliance with the NPDES permit. Final quantities will be determined in the field.

SOIL EROSION MIX

PLS RATE	NAME	QTY (lb)
	Total (lb)	

The Soil Erosion Mix is to be placed under the Class 1 and/or Class 2 erosion control material.

The Soil Erosion Mix consists of the Shoulder Area of the Permanent Seed Mix used on the project.

When seeding projects less than 1 acre, temporary and permanent seeding shall be combined and seeded at the same time. There is no seasonal restriction for seeding projects less than 1 acre.

NO.	DATE	REVISIONS	BY	APP'D
3	08/03/20	Added Note	MRD	ML
2	12/01/17	Revised Standard	MRD	SHS
1	06/01/17	Revised Standard	MRD	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

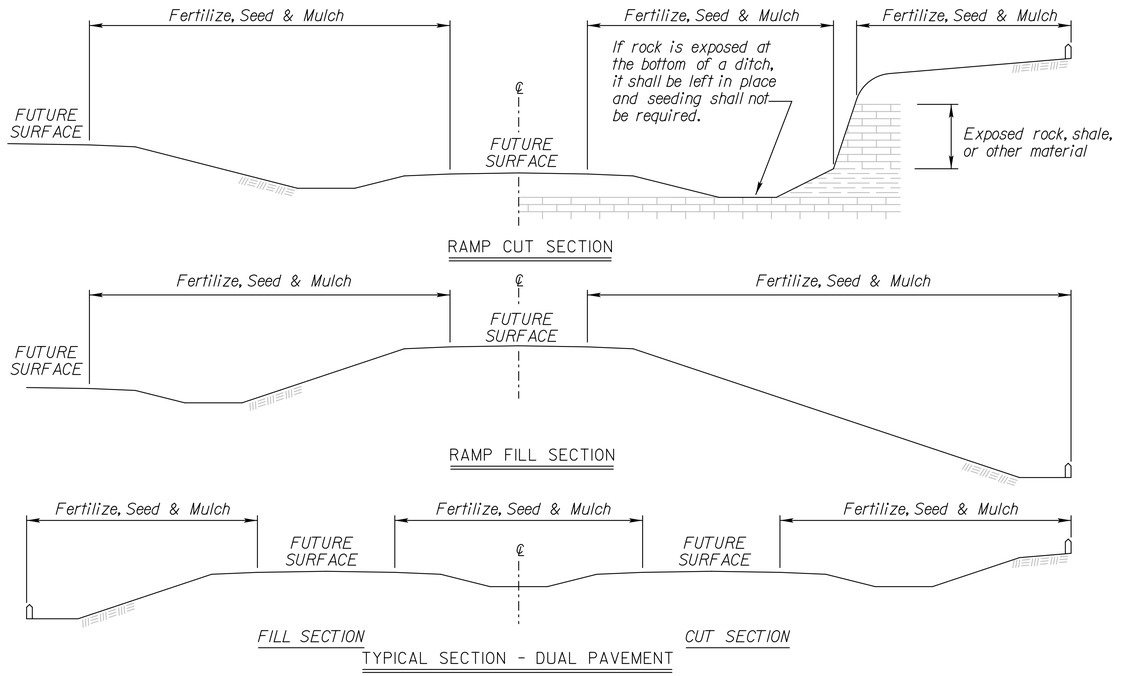
LA852A

FHWA APPROVAL		1/26/2018	APP'D		Scott H. Shields
DESIGNED	MRD	DETAILED	MRD	QUANTITIES	CADD
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK.

Std. Base File:
Plotted: KDOT*CADD.Support*tks.pltPlot Location:
File: la852a.dgn
Plot Date: 18-DEC-2020 0:03

Sheet No.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	24	52



FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P_2O_5, K_2O listed in Summary of Quantities will be acceptable.

- * - N = Nitrogen Rate of Application
- ** - P_2O_5 = Phosphorous Rate of Application
- *** - K_2O = Potassium Rate of Application

The Contractor will be required to finish areas of excavation, borrow and embankment in accordance with the specifications. Areas that require installation or construction of temporary water pollution control items will be finished in reasonable close conformity to the alignment, grade and cross section shown on the plans or as established by the Engineer.

CLT = Construction Limit Tract. This area is defined by the entire disturbed area of the project that requires seeding and erosion control measures to be placed. Any impervious areas (i.e. pavement, gravel, riprap, etc.) shall not be included in this measurement.

Slope = Defined by the area of the project that requires Class 1 erosion control material to be placed. This area shall be seeded using the Soil Erosion Mix prior to placement of the material. Drilling seed is preferred, however, broadcasting is acceptable if drilling is not possible.

Channel = Defined by the area of the project that requires Class 2 erosion control material to be placed. This area shall be seeded using the Soil Erosion Mix prior to placement of the material. Drilling seed is preferred, however, broadcasting is acceptable if drilling is not possible.

GENERAL NOTES

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded, and mulched. Soil preparation shall conform to the Standard Specifications.

Temporary seeding shall be done during any time of the year that the soil can be cultivated. After the temporary seeding has been completed on the entire project, permanent seeding shall be done during the normal seeding season.

MULCHING: Mulch shall be spread uniformly over all disturbed areas and punched in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching materials is generally as follows:

1¾ - 2¼ Tons per Acre = 1½" loose depth spread uniformly over acre.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.
Other vegetative mulches are acceptable only with the Engineer's concurrence.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

ADDITIVE BID

SUMMARY OF SEEDING / EROSION CONTROL QUANTITIES

P.L.S. RATE/ ACRE		ACRES		BID ITEM	QUANTITY	UNIT
CLT	SL/CH	CLT	SL/CH			
				Temporary Fertilizer (* - ** - ***)		LB
				Temporary Seed (Canada Wildrye)		LB
				Temporary Seed (Grain Oats)		LB
				Temporary Seed (Sterile Wheatgrass)		LB
				Soil Erosion Mix		LB
				Erosion Control (Class 1, Type Y)		SQ YD
				Erosion Control (Class 2, Type Y)		SQ YD
				Sediment Removal (Set Price)		CU YD
				Synthetic Sediment Barrier		LF
				Temporary Berm (Set Price)		LF
				Temporary Ditch Check (Rock)		CU YD
				Temporary Inlet Sediment Barrier		EACH
				Temporary Sediment Basin		CU YD
				Temporary Slope Drain		LF
				Temporary Stream Crossing		EACH
				Biodegradable Log (9")	30	LF
				Biodegradable Log (12")		LF
				Biodegradable Log (20")		LF
				Filter Sock (8")	20	LF
				Geotextile (Erosion Control)		SQ YD
				Silt Fence		LF
				SWPPP Design †	Lump Sum	LS
				SWPPP Inspection †	5	EACH
				Water Pollution Control Manager †	10	EACH
900 lbs / acre		.01		Mulch Tacking Slurry	6	LB
2 tons / acre		.01		Mulching		TON
				Water (Erosion Control) (Set Price)		MGAL

NOTE: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. See Permanent Seeding Summary of Seeding Quantities sheet LA850 for further details.

Geotextile (Erosion Control) shall be removed prior to placement of permanent slope protection.

Regreen and Quick Guard are the approved sterile wheatgrass products.

† If the total disturbed area of the project, not just the seeding area, is 1 acre or more, then these bid items must be included.

***** List size of material.*

The amount of mulch and mulch tacking slurry in the bid quantities is estimated. (Acres of Seeding X 1.5 X 2 Tons/Acre). The estimated quantity includes mulching associated with both temporary and permanent seeding operations. The total mulch and mulch tacking slurry required shall be determined in the field. The bid item for mulching and mulch tacking slurry shall be paid for according to the Standard Specifications.

Quantities for all erosion control items are estimated to give full flexibility for compliance with the NPDES permit. Final quantities will be determined in the field.

SOIL EROSION MIX

PLS RATE	NAME	QTY (lb)
	Total (lb)	

The Soil Erosion Mix is to be placed under the Class 1 and/or Class 2 erosion control material.

The Soil Erosion Mix consists of the Shoulder Area of the Permanent Seed Mix used on the project.

When seeding projects less than 1 acre, temporary and permanent seeding shall be combined and seeded at the same time. There is no seasonal restriction for seeding projects less than 1 acre.

NO.	DATE	REVISIONS	BY	APP'D
3	08/03/20	Added Note	MRD	ML
2	12/01/17	Revised Standard	MRD	SHS
1	06/01/17	Revised Standard	MRD	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

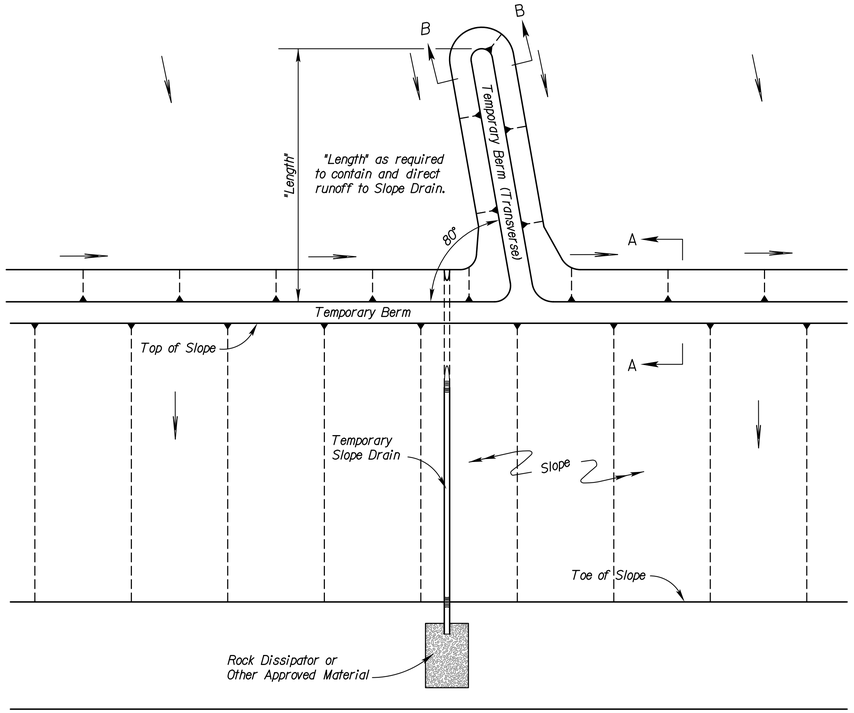
LA852A

FHWA APPROVAL		1/26/2018	APP'D	Scott H. Shields	
DESIGNED	MRD	DETAILED	MRD	QUANTITIES	CADD
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK.

Std. Base File:
Plotted: KDOT*CADD.Support*tks.pltPlot Location:
File: la852a.dgn
Plot Date: 18-DEC-2020 0h03

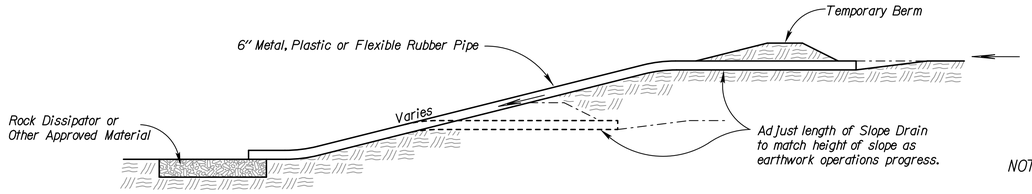
Sheet No.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	25	52



TYPICAL PLAN VIEW OF TEMPORARY BERM AND TEMPORARY SLOPE DRAIN

NO SCALE



TYPICAL PROFILE OF TEMPORARY SLOPE DRAIN

NO SCALE

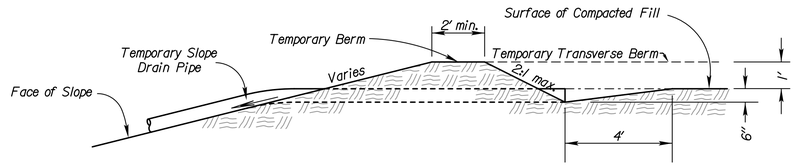
NOTES:

1) Temporary Slope Drain and Temporary Berm may be used on either project foreslopes or project backslopes.

2) Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.

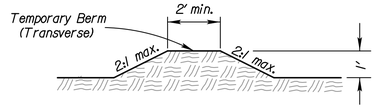
3) Pipe shall be secured in place as approved by Engineer.

4) Temporary Berms under 2,000 feet shall be bid by Set Price.



SECTION A-A

NO SCALE

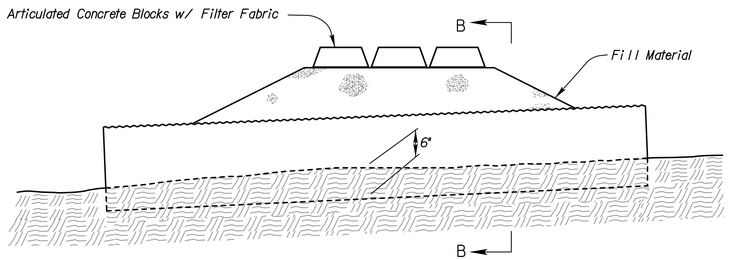


SECTION B-B

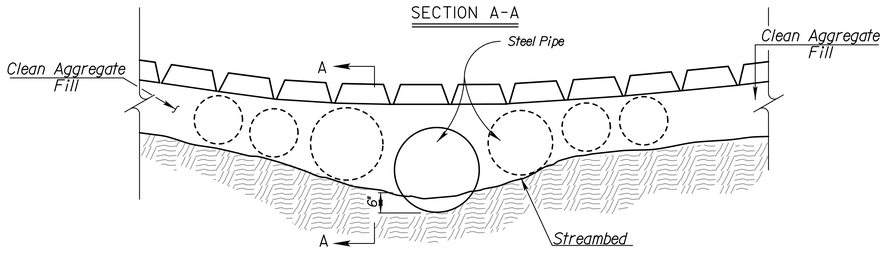
NO SCALE

TYPICAL PROFILE OF TEMPORARY BERM

NO SCALE



SECTION A-A



SECTION B-B

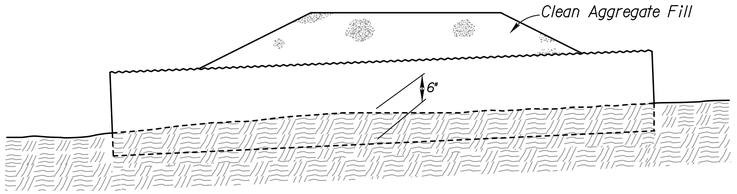
TEMPORARY STREAM CROSSING (ARTICULATED CONCRETE BLOCKS)

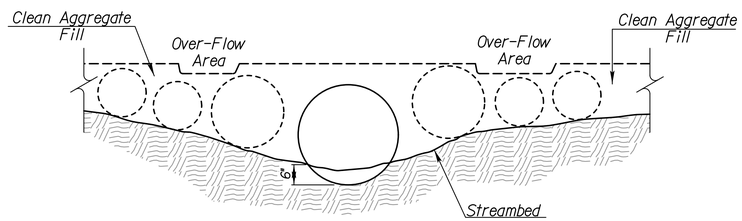
NO SCALE

Pipe size may vary

Place 1 pipe buried 6" into stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional pipes placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing.

See KDOT Specifications for more information





SECTION B-B

TEMPORARY STREAM CROSSING (AGGREGATE)

NO SCALE

Pipe size may vary

Place 1 pipe buried 6" into stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional pipes placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing.

See KDOT Specifications for more information

NO.	DATE	REVISIONS	BY	APP'D
3	6/11/13	Revised Standard	MRM	SHS
2	11/01/10	Revised Standard	MRM	SHS
1	10/15/10	Revised Standard	WCL	RDR

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

TEMPORARY SLOPE DRAIN

TEMPORARY STREAM CROSSING (AGGREGATE)

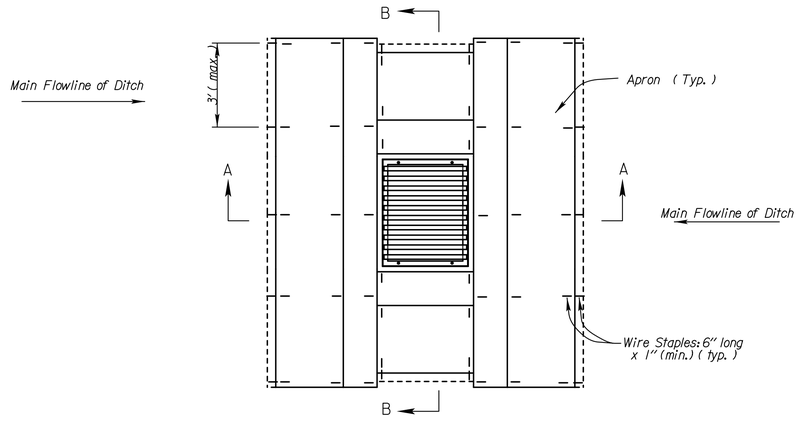
TEMP. STREAM CROSS. (ARTC. CONC. BLOCKS)

LA852B

FHWA APPROVAL	11/08/2010	APP'D	Scott H. Shields
DESIGNED MRM	DETAILED	QUANTITIES	CADD
DESIGN CK. SHS	DETAIL CK.	QUAN.CK.	CADD CK.

Std. Base File:
Plotted By: rlong | Plot Location: Bridge Design
File: la852b.dgn
Plot Date: 10-OCT-2016 11:44

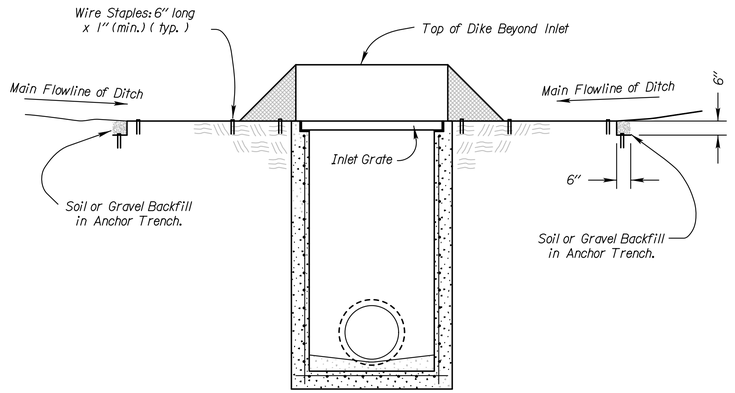
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	26	52



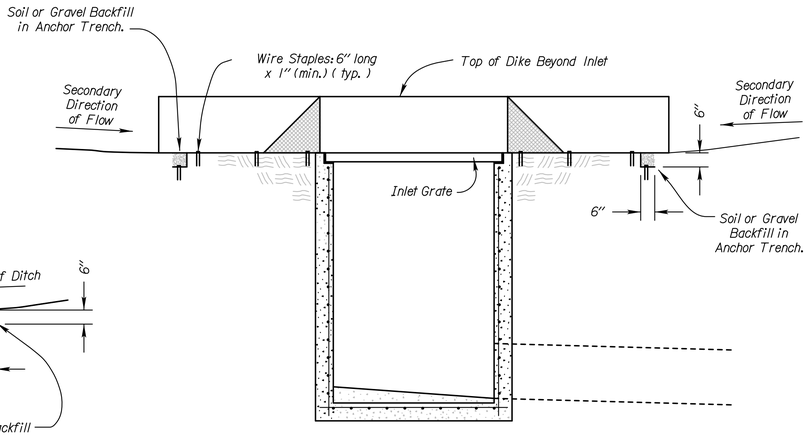
PLAN

TEMPORARY INLET SEDIMENT BARRIER
(TRIANGULAR SILT DIKE METHOD)

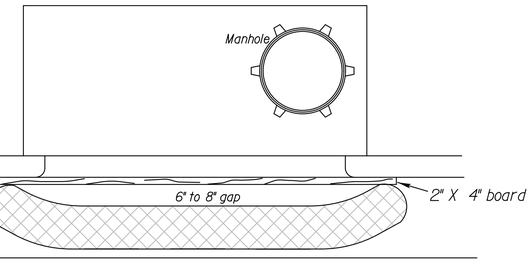
NO SCALE



SECTION A - A



SECTION B - B

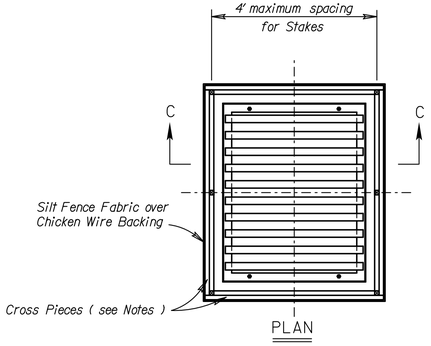


Bags = synthetic net (3mm mesh) or burlap bags

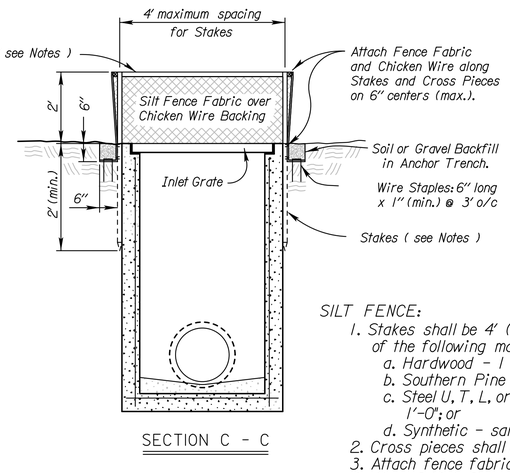
Rock = approximately 1" to 2" diameter

CURB INLET PROTECTION

1. If multiple gravel bags are required, place them in such a way that no gaps are evident.
2. Height of bags (8" minimum diameter) must not be above top of curb.
3. Alternative products may be used other than gravel bags such as the "Gutter Buddy". Products must be approved by the Engineer.
4. Curb inlet protection will be measured and paid for as Filter Sock.



PLAN



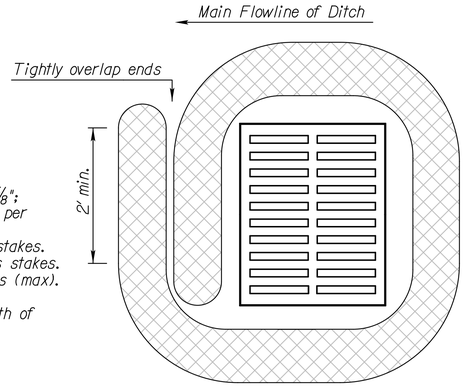
SECTION C - C

TEMPORARY INLET SEDIMENT BARRIER
(SILT FENCE METHOD)

NO SCALE

SILT FENCE:

1. Stakes shall be 4' (min.) long and of one of the following materials:
   a. Hardwood - 1 3/16" x 1 3/16";
   b. Southern Pine (No. 2) - 2 5/8" x 2 5/8";
   c. Steel U, T, L, or C Section - .95 lbs. per 1'-0"; or
   d. Synthetic - same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.



Note: 25% of log shall be keyed into ground during installation.

Stake every 4'

Drop inlet use
1'-6" TO 1'-8" diameter log

BIODEGRADABLE LOG/FILTER SOCK
DROP INLET PROTECTION

Material Requirements
Use 100% shredded mulch or other non-compost biodegradable material as fill for logs.
No compost or fines.
No hay or straw.
Do not use material which prohibits water infiltration.
Log Mesh: Use mesh with 1/4" openings or larger. Mesh must allow water infiltration but also hold fill material in place.

NO.	DATE	REVISIONS	BY	APP'D
3	9/26/19	Changed Direction of Main Flowline of Ditch Arrow	MRD	SHS
2	3/10/15	Revised Standard	RA	SHS
1	6/01/13	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

TEMP. INLET SEDIMENT BARRIER (SILT FENCE)
TEMP. INLET SEDIMENT BARRIER (T.S.D.)
CURB INLET PROTECTION
DROP INLET PROTECTION

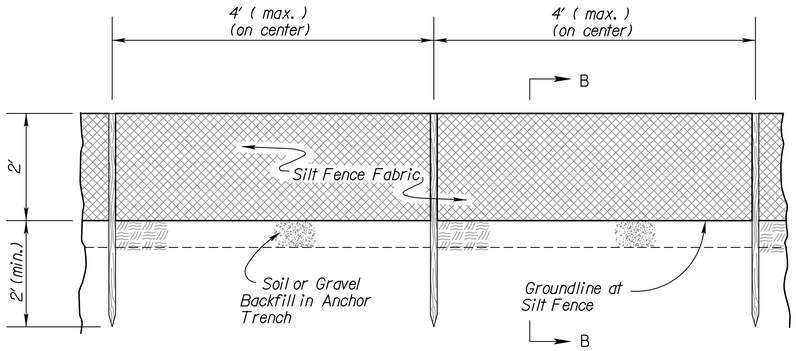
LA852C

FHWA APPROVAL		3/10/2015	APP'D	Scott H. Shields	
DESIGNED	RA	DETAILED	RA	QUANTITIES	CADD
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK.

Sheet No.

Std. Base File:
Plotted: KDOT*CADD.Support\ks.plot Location:
File: la852c.dgn
Plot Date: 18-DEC-2020 0:01

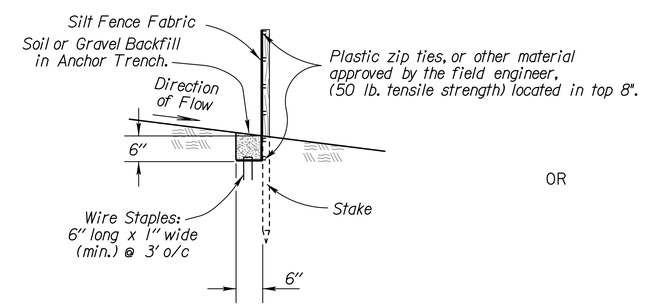
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	27	52



TYPICAL ELEVATION

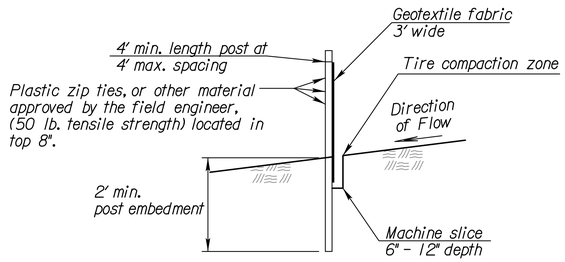
SILT FENCE BARRIER

NO SCALE

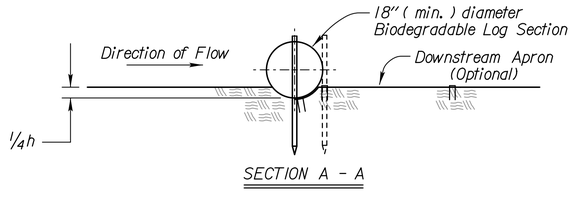


SECTION B-B

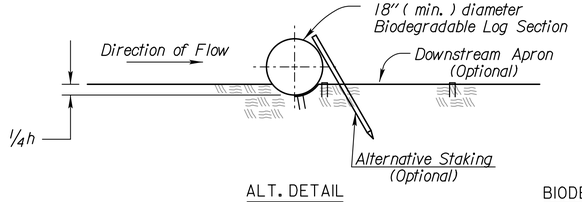
OR



SECTION B-B

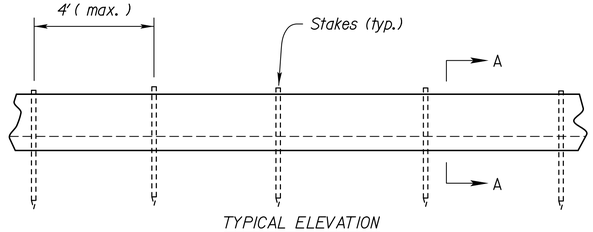


SECTION A - A



ALT. DETAIL

OPTIONAL



TYPICAL ELEVATION

BIODEGRADABLE LOG SLOPE INTERRUPTIONS

OR Filter Sock

INSTALLATION NOTES

SILT FENCE:

1. Stakes shall be 4' (min.) long and of one of the following materials:
   a. Hardwood - 1 3/16" x 1 3/16";
   b. Southern Pine (No. 2) - 2 5/8" x 2 5/8";
   c. Steel U, T, L, or C Section - .95 lbs. per 1'-0"; or
   d. Synthetic - same strength as wood stakes.
2. Attach fence fabric with 3 zip ties within the top 8" of the fence
   Alternate attachment methods may be approved by the Engineer on a performance basis.
3. Use of high flow material is acceptable.
4. Refer to plan sheets to estimate the length of silt fence required.

BIODEGRADABLE LOG OR FILTER SOCK

1. Place biodegradable logs or filter sock tightly together minimum overlap of 18".
2. Wood stakes shall be 2" x 2" (nom.).
3. Refer to plan sheets to estimate length of biodegradable log and filter sock required.
4. Each log or sock (except compost filter socks) should be keyed into the ground at a minimum of 25% of its height. Compost filter socks should be placed on smooth prepared ground with no gaps between the sock and soil.
5. Length of stakes should be 2 times the height of the log at a minimum with minimum ground embedment equal to the height of the log / sock.

Biodegradable Log or Filter Sock Slope Interruptions

		PRODUCT		
		9" Sediment Log or 8" Filter Sock (ft)	12" Sediment Log or 12" Filter Sock (ft)	20" Sediment Log or 18" Filter Sock (ft)
Slope Gradient	≤4H:1V	40	60	80
	3H:1V	30	45	60

Deviations should be approved by the Field Engineer.

	BIODEGRADABLE LOG MATERIAL	
	LOW FLOW	HIGH FLOW
9"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber
12"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber
18"-20"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber

GENERAL NOTES

1) Slope interruptions shall be placed along contour lines, with a short section turned upgrade at each end of the barrier.
2) The maximum length of the slope interruptions shall not exceed 250 feet, and the barrier ends need to be staggered.
3) Interruptions damaged by Contractor's negligence, including improper maintenance or lack of maintenance, shall be repaired immediately by Contractor at no additional cost to KDOT.
4) Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

NO.	DATE	REVISIONS	BY	APP'D
3	6/28/16	Revised Standard	RA	SHS
2	3/01/15	Revised Standard	RA	SHS
1	6/01/13	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

SLOPE INTERRUPTIONS BIODEGRADABLE LOG / SILT FENCE

LA852D

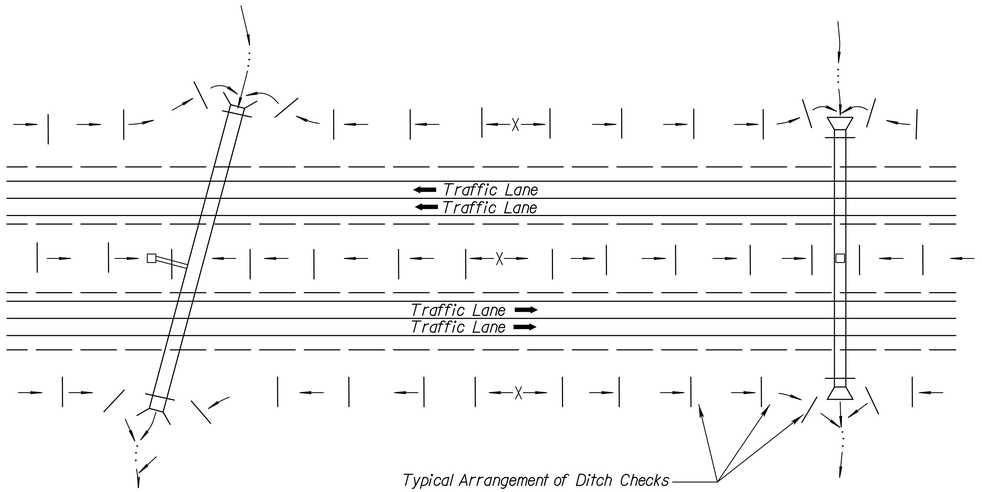
FHWA APPROVAL		9/14/2016	APP'D	Scott H. Shields	
DESIGNED	SHS	DETAILED RA	QUANTITIES	CADD	
DESIGN CK.	SHS	DETAIL CK.	QUAN.CK.	CADD CK.	

Std. Base File:
Plotted By: melissa
File: la852d.dgn
Plot Date: 14-SEP-2016 13:07
Plot Location: Landscape

CADconform Certify This File

CADconform Certify This File

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	28	52



TYPICAL DITCH CHECK LAYOUT PLAN

NO SCALE

20" BIOLOG CHECK SPACING	
DITCH ℄ SLOPE (%)	SPACING INTERVAL (FEET)
1.0	*125*
2.0	*60*
3.0	*40*
4.0	*30*
5.0	*25*
NOTE: Use this spacing for all except Rock Ditch Checks.	

18" FILTER SOCK CHECK SPACING	
DITCH ℄ SLOPE (%)	SPACING INTERVAL (FEET)
1.0	*110*
2.0	*55*
3.0	*35*
4.0	*25*
5.0	*20*
NOTE: Use this spacing for all except Rock Ditch Checks.	

GENERAL NOTES

1) *The choice of ditch check methods is at the option of the Contractor.*

2) *Use only rock checks in situations where the ditch slope is 6 percent or greater.*

2) *Ditch checks damaged by Contractor's negligence, including improper maintenance or lack of maintenance, shall be repaired by Contractor at no extra cost to KDOT.*

Std. Base File:	
Plotted By: *melissa*	Plot Location: *Landscape*
File: *la852e.dgn*	
Plot Date: *14-SEP-2016 13:10*	

NO.	DATE	REVISIONS	BY	APP'D
3	8/10/16	Revised Standard	RAA	SHS
2	6/28/16	Revised Standard	RAA	SHS
1	6/01/13	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

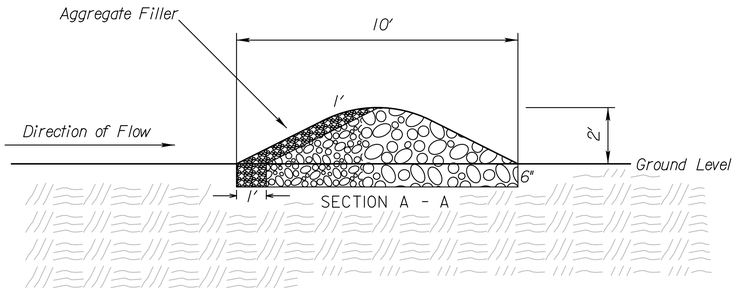
DITCH CHECKS

LA852E

FHWA APPROVAL	9/14/2016	APP'D	Scott H. Shields		
DESIGNED	SHS	DETAILED	RAA	QUANTITIES	CADD RAA
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK. SHS

CADconform Certify This File

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	29	52



TYPICAL ELEVATION

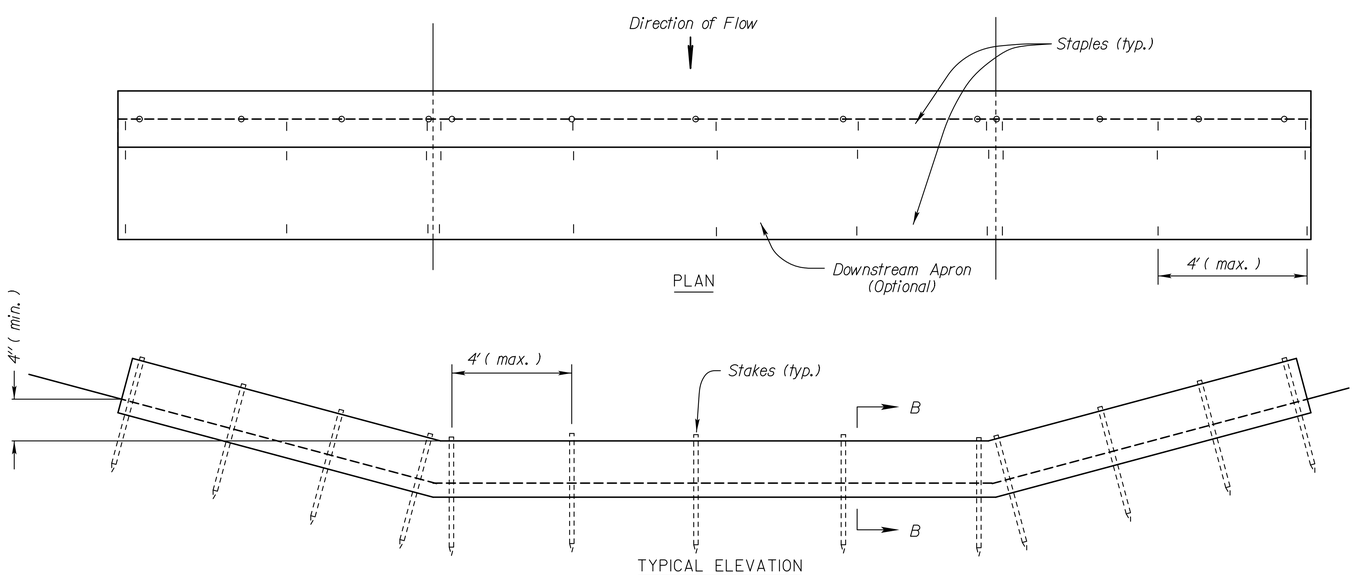
ROCK DITCH CHECK

NO SCALE

TEMPORARY ROCK DITCH CHECK SPACING	
DITCH ℄ SLOPE (%)	*SPACING INTERVAL (FEET)*
5.0	*60*
6.0	*50*
7.0	*43*
8.0	*36*
9.0	*33*
10.0	*29*
NOTE: Use this spacing for Rock Ditch Checks only.	

ROCK DITCH CHECK NOTES

1. *Rock shall be clean aggregate, D50-6" and aggregate filler.*
2. *Place rock in such manner that water will flow over, not around ditch check.*
3. *Do not use rock ditch checks in clear zone.*
4. *Excavation: The ditch area shall be reshaped to fill any eroded areas. Prior to placement of the rock, the ditch shall be excavated to the dimensions of the Rock Ditch Check and to a minimum depth of 6" (150mm). After placement of the rock, backfill and compact any over-excavated soil to ditch grade. This work shall be subsidiary to the bid item Temporary Ditch Check (Rock).*
5. *Aggregate excavated on site may be used as an alternate to the 6" rock, if approved by the Engineer.*
6. *The Engineer may approve the use of larger aggregates for the downstream portion of the check when conditions warrant their use.*
7. *When the use of larger rock is approved, D50-6" rock will be placed between the larger aggregate and the aggregate filler.*
8. *Aggregate filler will be placed on the upstream face of the ditch check. Aggregate filler will comply with Filter Course Type I, Division 1114.*

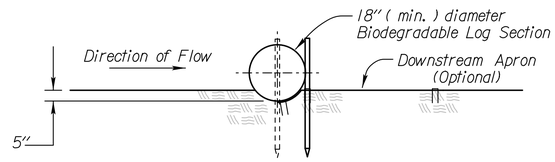


TYPICAL ELEVATION

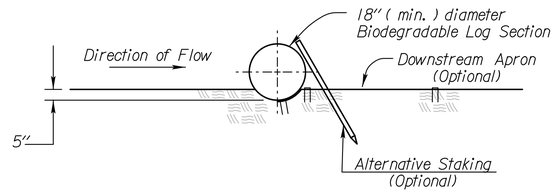
BIODEGRADABLE LOG DITCH CHECK

OR Filter Sock Ditch Check

NO SCALE



SECTION B - B



ALT. DETAIL
OPTIONAL

BIODEGRADABLE LOG DITCH CHECK NOTES

1. *Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.*
2. *Overlap sections a minimum of 18".*
3. *Stakes shall be wood or steel according to Section 2114 of the Standard Specifications. Length of stakes shall be a minimum of 2 x the diameter of the log.*
4. *Use Erosion Control (Class 1) (Type C) as the downstream apron when required.*
5. *A downstream apron is required when directed by the Engineer. Apron material will be paid at the contract unit price.*
6. *Each log or sock (except compost filter socks) should be keyed into the ground at a minimum of 25% of its height. Compost filter socks should be placed on smooth prepared ground with no gaps between the sock and soil.*

NO.	DATE	REVISIONS	BY	APP'D
3	11/19/20	Revised Standard	MRD	ML
2	8/10/16	Revised Standard	RAA	SHS
1	10/21/15	Revised Standard	RAA	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL
ROCK DITCH CHECKS
BIODEGRADABLE LOG DITCH CHECKS

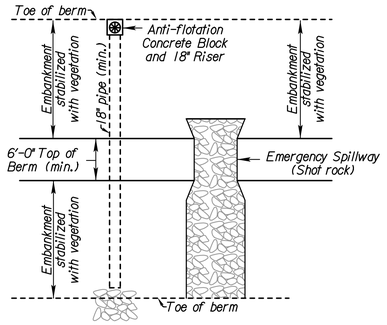
LA852G

FHWA APPROVAL		11/19/2020	APP'D	Mervin Lare			
DESIGNED	ML	DETAILED	DK	QUANTITIES		CADD	RAA
DESIGN CK.	ML	DETAIL CK.	ML	QUAN.CK.		CADD CK.	RAA

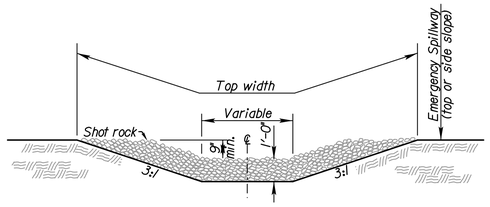
Sheet No.

Std. Base File: la852g.dgn
Plotted: KDOT*CADD\Support files\plot Location:
File: la852g.dgn
Plot Date: 24-NOV-2020 0:01

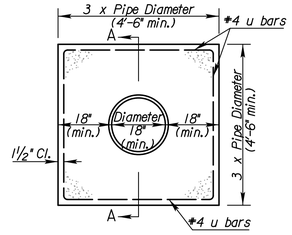
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	30	52



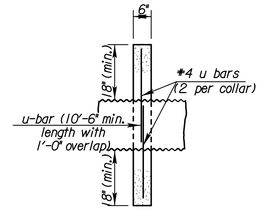
SEDIMENT STORAGE BASIN (PLAN)



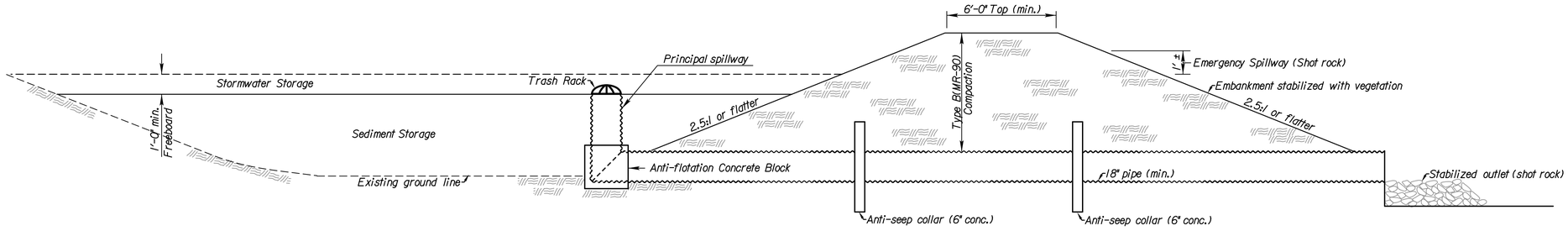
CROSS SECTION (EMERGENCY SPILLWAY)



CONCRETE ANTI-SEEP COLLAR



SECTION A-A



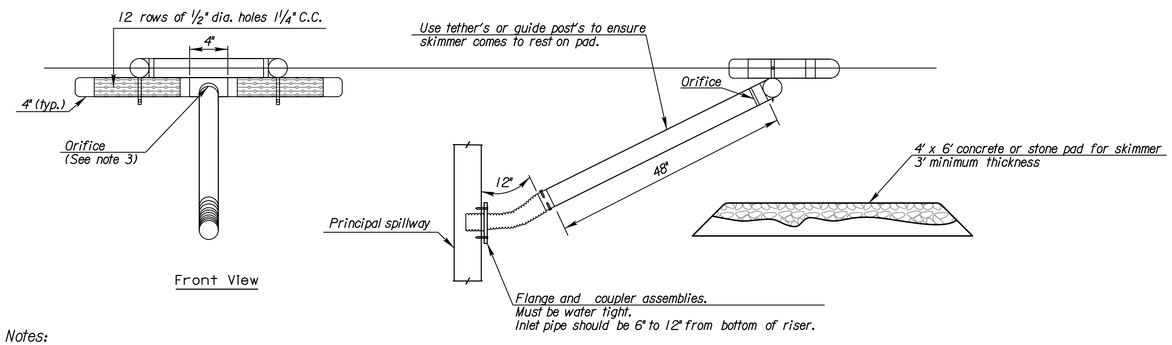
SEDIMENT STORAGE BASIN (ELEVATION)

NOTES:

1) Temporary Sediment Basins shall be constructed at locations as directed by the Engineer or as approved in the SWPPP Schedule. All work and materials necessary, including but not limited to, the fill material, compaction, drainage pipes, aggregates and all other incidentals necessary to construct the basin, shall be paid as "Temporary Sediment Basin".

2) Lengths and top dimensions shall be determined in the field by the Engineer.

3) Skimmer dewatering device required and must be used reguardless the size of the drainage area.



Notes:

1. *All P.V.C. pipes are to be schedule 40.*
2. *HDPE flexible drain pipes is to be attached to the pond outlet structure with water-tight connections.*
3. *The orifice shall be sized of to provide drawdown time to 2 to 5 days and approved by the engineer.*
4. *Other skimmer designs maybe used that dewaters from the surface at a controlled rate. The design must be approved by the engineer.*

SKIMMER DEWATERING DEVICE

SEDIMENT STORAGE BASIN LOCATIONS

STATION TO STATION	SIDE	REQUIRED STORAGE CAPACITY

NO.	DATE	REVISIONS	BY	APP'D
3				
2	9/3/13	Added Skimmer Dewatering Device	MRM	SHS
1	7/17/13	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

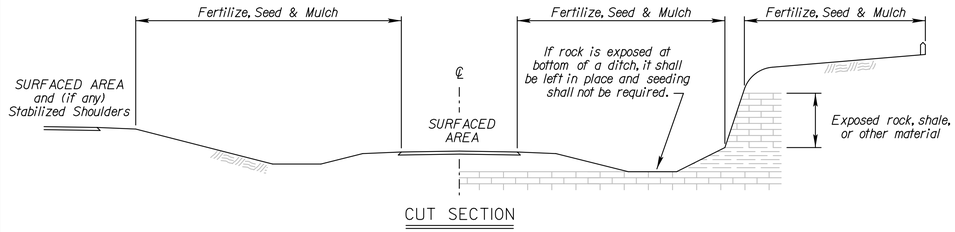
SEDIMENT STORAGE BASIN

LA852H

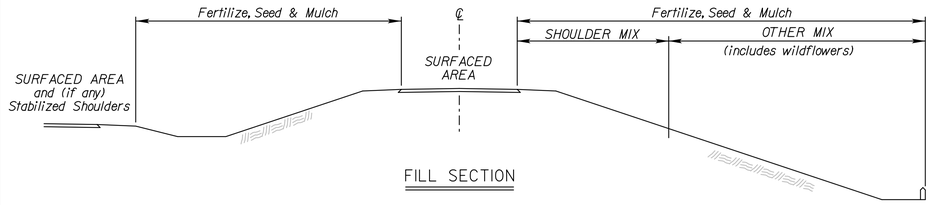
FHWA APPROVAL	09/24/2013	APP'D	Scott H. Shields		
DESIGNED	BB	DETAILED	BB	QUANTITIES	CADD BB
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK. SHS

Std. Base File:
Plotted By: rlang | Plot Location: Bridge Design
File: la852h.dgn
Plot Date: 10-OCT-2016 11:45

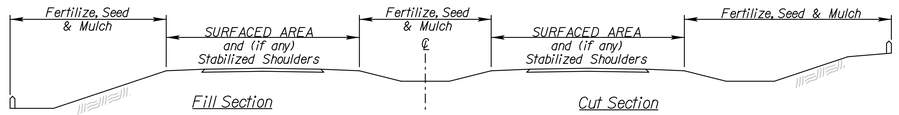
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	31	52



CUT SECTION



FILL SECTION



TYPICAL SECTION - DUAL PAVEMENT

GRASS & WILDFLOWER SEEDING SEASONS

COOL SEASON GRASSES February 15 thru April 20 August 15 thru September 30	WARM SEASON GRASSES & WILDFLOWERS November 15 thru June 1
SPECIES	SPECIES
Bluegrasses	Bermuda Grass
Brome Grasses	Big Bluestem
Canada Wildrye	Blue Grama
Fescues	Buffalo Grass
Prairie Junegrass	Indiangrass
Ryegrasses	Little Bluestem
Sterile Wheatgrass	Sand Bluestem
Tall Dropseed	Sand Dropseed
Western Wheatgrass	Sand Lovegrass
	Side Oats Grama
	Switchgrass
	Wildflower Mixes

When the area to be seeded is 1 acre or more, if Cool Season grasses are mixed with Warm Season grasses, seed the area during the Warm Season.

When the area to be seeded is less than 1 acre, seed the area any time of the year.

SODDING SEASONS

COOL SEASON GRASSES March 1 thru April 15 September 1 thru November 15	WARM SEASON GRASSES May 15 thru September 1
SPECIES	SPECIES
Bluegrass Sod	Buffalo Grass Sod
Fescue Sod	

If the soil is workable, the Engineer may allow placement of sod between November 15 and March 1. If sod is placed during this time, maintain the sod until 20 days after the beginning of the spring sodding season.

GENERAL NOTES

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

All borrow areas shown on the plans are to be fertilized, seeded, and mulched. However, operation in borrow areas where crops are growing may be omitted when requested by the owner.

If temporary cover has provided stable slopes with no erosion, seed the permanent grasses into the existing cover. If there has been erosion that requires repair prior to seeding, then it may be necessary to regrade the area, resulting in bare ground.

FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P_2O_5, K_2O listed in Summary of Seeding Quantities will be acceptable.

MULCHING: Mulch shall be spread uniformly over all disturbed areas and punched in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching material is generally as follows:

1¾ - 2¼ Tons per Acre = 1½" loose depth spread uniformly over acre.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

Other vegetative mulches are acceptable only with the Engineer's concurrence.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

When seeding projects less than 1 acre, temporary and permanent seeding shall be combined and seeded at the same time. There is no seasonal restriction for seeding projects less than 1 acre.

NATIVE WILDFLOWER MIX 1

PLS RATE	NAME	QTY (lb)
0.3	Butterfly Milkweed	
0.3	Common Milkweed	
0.3	Black Eyed Susan	
0.5	Blanket Flower	
0.5	False Sunflower	
0.5	Lance-Leaf Coreopsis	
0.2	Maximilian Sunflower	
0.1	New England Aster	
0.2	Pinnate Prairie Coneflower	
0.2	Plains Coreopsis	
0.3	Purple Coneflower	
0.3	Upright Prairie Coneflower	
0.3	Dames Rocket	
0.3	Lemon Mint	
0.2	Pitcher Sage	
0.2	Wild Bergamot	
1.0	Illinois Bundleflower	
0.2	Common Evening Primrose	
0.1	Hoary Verbena	
0.8	Purple Prairie Clover	
0.3	Roundhead Lespedeza	
3.0	Showy Partridge Pea	
0.2	White Prairie Clover	
10.3	Total (lb)	

NATIVE WILDFLOWER MIX 2

PLS RATE	NAME	QTY (lb)
0.3	Butterfly Milkweed	
0.3	Black Eyed Susan	
0.5	Black Sampson Coneflower	
1.0	Blanket Flower	
0.2	Maximilian Sunflower	
0.2	Plains Coreopsis	
0.2	Upright Prairie Coneflower	
0.2	Western Yarrow	
0.3	Lemon Mint	
0.4	Pitcher Sage	
1.5	Illinois Bundleflower	
0.2	Common Evening Primrose	
1.0	Blue Wild Indigo	
0.4	Leadplant	
0.4	Purple Prairie Clover	
0.3	White Prairie Clover	
7.4	Total (lb)	

Package and deliver the wildflower seed separately from the grass seed mix. Package and deliver the Tall Drop Seed separately from the grass seed and the wildflower mix. Place the grass seed (except Tall Drop Seed) in the large seed box and drill (cover) seed 1/8" - 1/4". Place the wildflower seed in a separate seed box and drill (cover) seed 1/16" maximum. Place the Tall Drop Seed in a separate (third) seed box and place the seed (using the seed drill) on the soil surface.

OPTION: Broadcast Tall Drop Seed on the soil surface.

BASE BID

SUMMARY OF SEEDING QUANTITIES

P.L.S. RATE/ACRE SHLDR	P.L.S. RATE/ACRE OTHER	ACRES SHLDR	ACRES OTHER	BID ITEM	QUANTITY	UNIT
100		.06		Fertilizer (16-20-0)		
2.5		.06		Seed (Blue Grama Grass Seed (Lovington))		
40		.06		Seed (Buffalograss Seed (Treated))		
				Seeding	1	L.S.
				Mulching *		

SHLDR = Seeded with the Shoulder Mix. Typically 15 feet for 2-lane roads and 30 feet for 4-lane roads. Includes outside roadsides, turfed portions of shoulders, and turfed portion of the median.

OTHER = Seeded with the "Other" Mix. Designated as all other turf areas, except the Shoulder. Usually includes a Native Wildflower Mix.

NOTE: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. All disturbed areas shall be seeded, fertilized and mulched at the listed rate per acre. The acres are estimated.

Refer to the Standard Specifications, Division 900, Section 904 'Seeding', and Section 907 'Sodding', for the seeding and sodding seasons.

** See LA852A for mulching quantity. The quantity of mulch is estimated (Acres of Seeding X 1.5 X 2 Tons/Acre). The total mulch required shall be determined in the field. The bid item for mulching shall be paid for according to the Standard Specifications.*

NO.	DATE	REVISIONS	BY	APP'D
2	11/25/20	Updated Seeding / Sodding Periods Charts	MRD	ML
1	08/03/20	Revised Standard	MRD	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

PERMANENT SEEDING
SUMMARY OF SEEDING QUANTITIES

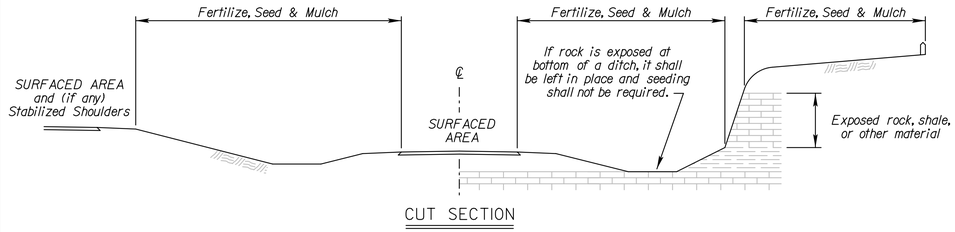
LA850

FHWA APPROVAL	05/06/2019	APP'D	Mervin Lare		
DESIGNED	MRD	DETAILED	MRD	QUANTITIES	CADD
DESIGN CK.		DETAIL CK.		QUAN.CK.	CADD CK.

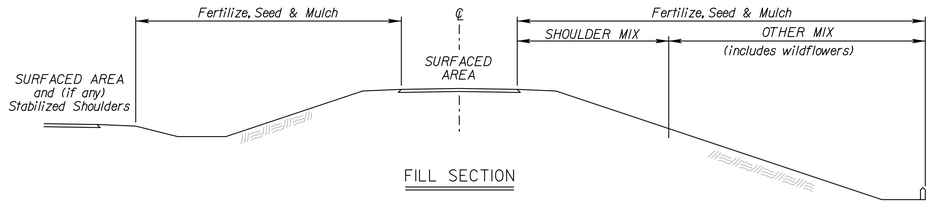
Sheet No.

Std. Base File:
Plotted: K00**CADD.Supportoks.plot Location:
File: la850.dgn
Plot Date: 18-DEC-2020 08:03

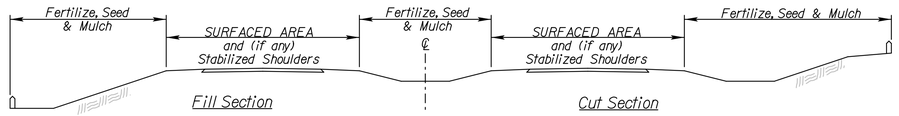
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	32	52



CUT SECTION



FILL SECTION



TYPICAL SECTION - DUAL PAVEMENT

GRASS & WILDFLOWER SEEDING SEASONS

COOL SEASON GRASSES February 15 thru April 20 August 15 thru September 30	WARM SEASON GRASSES & WILDFLOWERS November 15 thru June 1
SPECIES	SPECIES
Bluegrasses	Bermuda Grass
Brome Grasses	Big Bluestem
Canada Wildrye	Blue Grama
Fescues	Buffalo Grass
Prairie Junegrass	Indiangrass
Ryegrasses	Little Bluestem
Sterile Wheatgrass	Sand Bluestem
Tall Dropseed	Sand Dropseed
Western Wheatgrass	Sand Lovegrass
	Side Oats Grama
	Switchgrass
	Wildflower Mixes

When the area to be seeded is 1 acre or more, if Cool Season grasses are mixed with Warm Season grasses, seed the area during the Warm Season.

When the area to be seeded is less than 1 acre, seed the area any time of the year.

SODDING SEASONS

COOL SEASON GRASSES March 1 thru April 15 September 1 thru November 15	WARM SEASON GRASSES May 15 thru September 1
SPECIES	SPECIES
Bluegrass Sod	Buffalo Grass Sod
Fescue Sod	

If the soil is workable, the Engineer may allow placement of sod between November 15 and March 1. If sod is placed during this time, maintain the sod until 20 days after the beginning of the spring sodding season.

GENERAL NOTES

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

All borrow areas shown on the plans are to be fertilized, seeded, and mulched. However, operation in borrow areas where crops are growing may be omitted when requested by the owner.

If temporary cover has provided stable slopes with no erosion, seed the permanent grasses into the existing cover. If there has been erosion that requires repair prior to seeding, then it may be necessary to regrade the area, resulting in bare ground.

FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P_2O_5, K_2O listed in Summary of Seeding Quantities will be acceptable.

MULCHING: Mulch shall be spread uniformly over all disturbed areas and punched in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching material is generally as follows:

1¾ - 2¼ Tons per Acre = 1½" loose depth spread uniformly over acre.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

Other vegetative mulches are acceptable only with the Engineer's concurrence.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

When seeding projects less than 1 acre, temporary and permanent seeding shall be combined and seeded at the same time. There is no seasonal restriction for seeding projects less than 1 acre.

NATIVE WILDFLOWER MIX 1

PLS RATE	NAME	QTY (lb)
0.3	Butterfly Milkweed	
0.3	Common Milkweed	
0.3	Black Eyed Susan	
0.5	Blanket Flower	
0.5	False Sunflower	
0.5	Lance-Leaf Coreopsis	
0.2	Maximillian Sunflower	
0.1	New England Aster	
0.2	Pinnate Prairie Coneflower	
0.2	Plains Coreopsis	
0.3	Purple Coneflower	
0.3	Upright Prairie Coneflower	
0.3	Dames Rocket	
0.3	Lemon Mint	
0.2	Pitcher Sage	
0.2	Wild Bergamot	
1.0	Illinois Bundleflower	
0.2	Common Evening Primrose	
0.1	Hoary Verbena	
0.8	Purple Prairie Clover	
0.3	Roundhead Lespedeza	
3.0	Showy Partridge Pea	
0.2	White Prairie Clover	
10.3	Total (lb)	

NATIVE WILDFLOWER MIX 2

PLS RATE	NAME	QTY (lb)
0.3	Butterfly Milkweed	
0.3	Black Eyed Susan	
0.5	Black Sampson Coneflower	
1.0	Blanket Flower	
0.2	Maximillian Sunflower	
0.2	Plains Coreopsis	
0.2	Upright Prairie Coneflower	
0.2	Western Yarrow	
0.3	Lemon Mint	
0.4	Pitcher Sage	
1.5	Illinois Bundleflower	
0.2	Common Evening Primrose	
1.0	Blue Wild Indigo	
0.4	Leadplant	
0.4	Purple Prairie Clover	
0.3	White Prairie Clover	
7.4	Total (lb)	

Package and deliver the wildflower seed separately from the grass seed mix. Package and deliver the Tall Drop Seed separately from the grass seed and the wildflower mix. Place the grass seed (except Tall Drop Seed) in the large seed box and drill (cover) seed 1/8" - 1/4". Place the wildflower seed in a separate seed box and drill (cover) seed 1/16" maximum. Place the Tall Drop Seed in a separate (third) seed box and place the seed (using the seed drill) on the soil surface.

OPTION: Broadcast Tall Drop Seed on the soil surface.

ADDITIVE BID

SUMMARY OF SEEDING QUANTITIES

P.L.S. RATE/ACRE SHLDR	P.L.S. RATE/ACRE OTHER	ACRES SHLDR	ACRES OTHER	BID ITEM	QUANTITY	UNIT
100		.006		Fertilizer (16-20-0)		
2.5		.006		Seed (Blue Grama Grass Seed (Lovington))		
40		.006		Seed (Buffalograss Seed (Treated))		
				Seeding	1	L.S.
				Mulching *		

SHLDR = Seeded with the Shoulder Mix. Typically 15 feet for 2-lane roads and 30 feet for 4-lane roads. Includes outside roadsides, turfed portions of shoulders, and turfed portion of the median.

OTHER = Seeded with the "Other" Mix. Designated as all other turf areas, except the Shoulder. Usually includes a Native Wildflower Mix.

NOTE: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. All disturbed areas shall be seeded, fertilized and mulched at the listed rate per acre. The acres are estimated.

Refer to the Standard Specifications, Division 900, Section 904 'Seeding', and Section 907 'Sodding', for the seeding and sodding seasons.

** See LA852A for mulching quantity. The quantity of mulch is estimated (Acres of Seeding X 1.5 X 2 Tons/Acre). The total mulch required shall be determined in the field. The bid item for mulching shall be paid for according to the Standard Specifications.*

NO.	DATE	REVISIONS	BY	APP'D
2	11/25/20	Updated Seeding / Sodding Periods Charts	MRD	ML
1	08/03/20	Revised Standard	MRD	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

PERMANENT SEEDING
SUMMARY OF SEEDING QUANTITIES

LA850

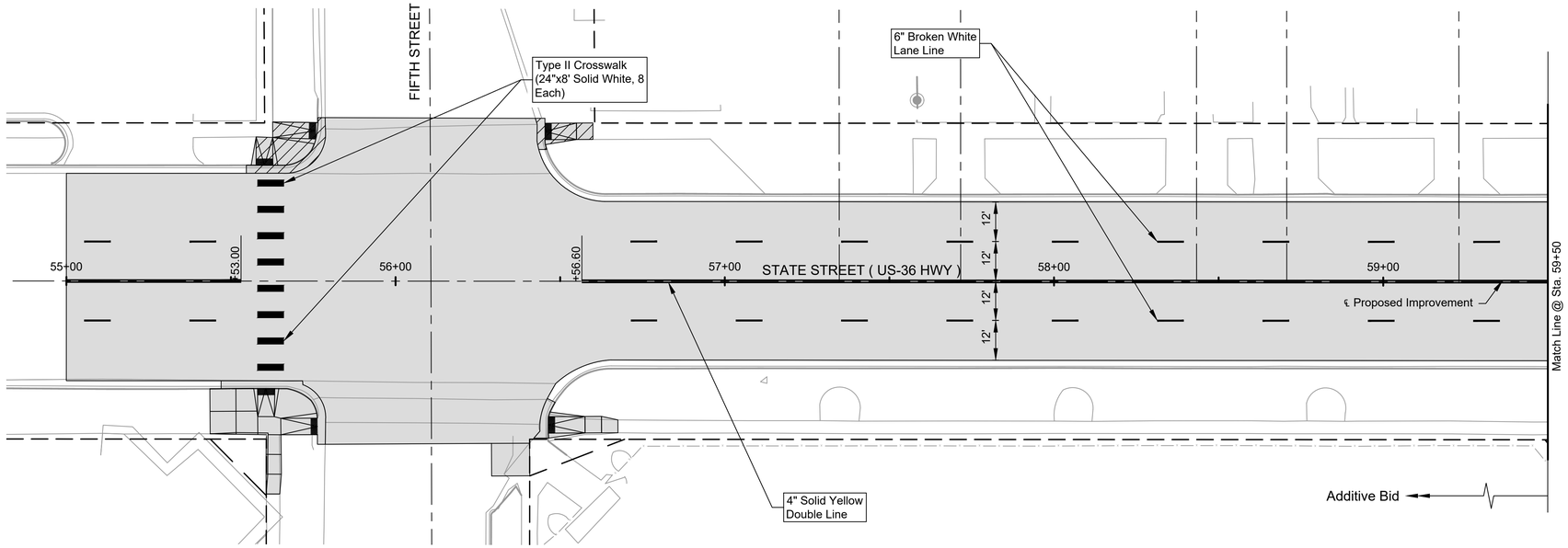
FHWA APPROVAL	05/06/2019	APP'D	Mervin Lare		
DESIGNED	MRD	DETAILED	MRD	QUANTITIES	CADD
DESIGN CK.		DETAIL CK.		QUAN.CK.	CADD CK.

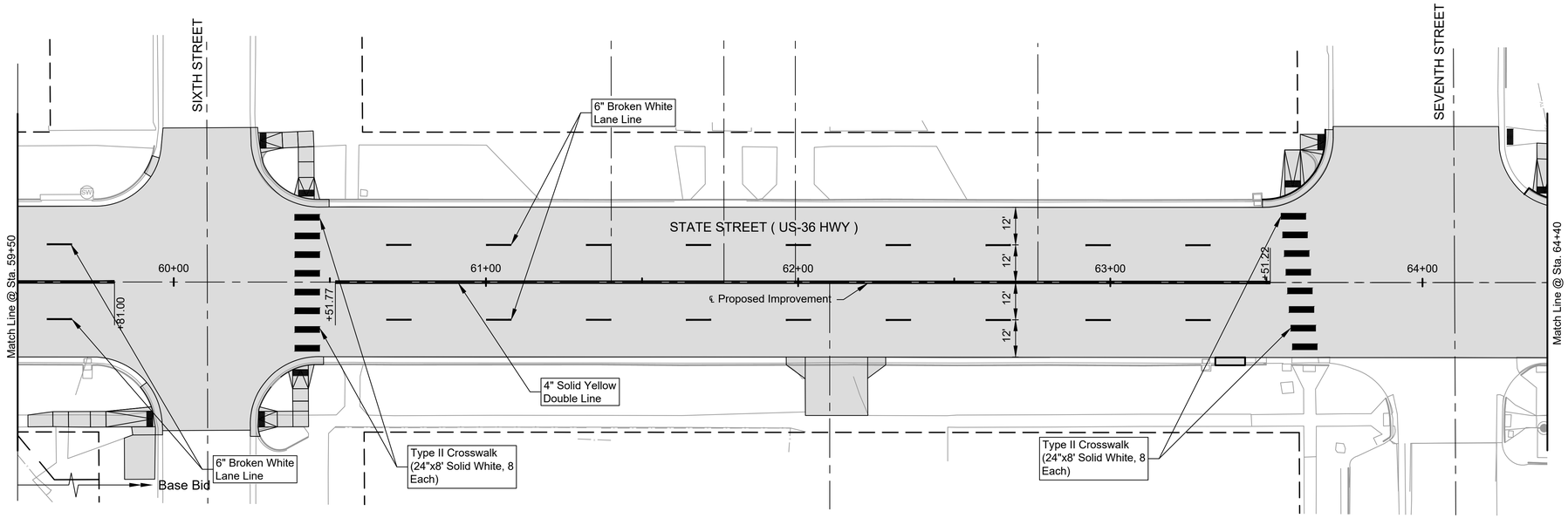
Sheet No.

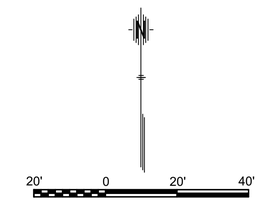
Std. Base File:
Plotted: KDOT#CADD.Support#ks.pltPlot Location:
File: la850.dgn
Plot Date: 18-DEC-2020 04:03

20-1374M					
STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	36-74 KA-5433-01	2021	33	52	

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS







SCALE: 1" = 20'

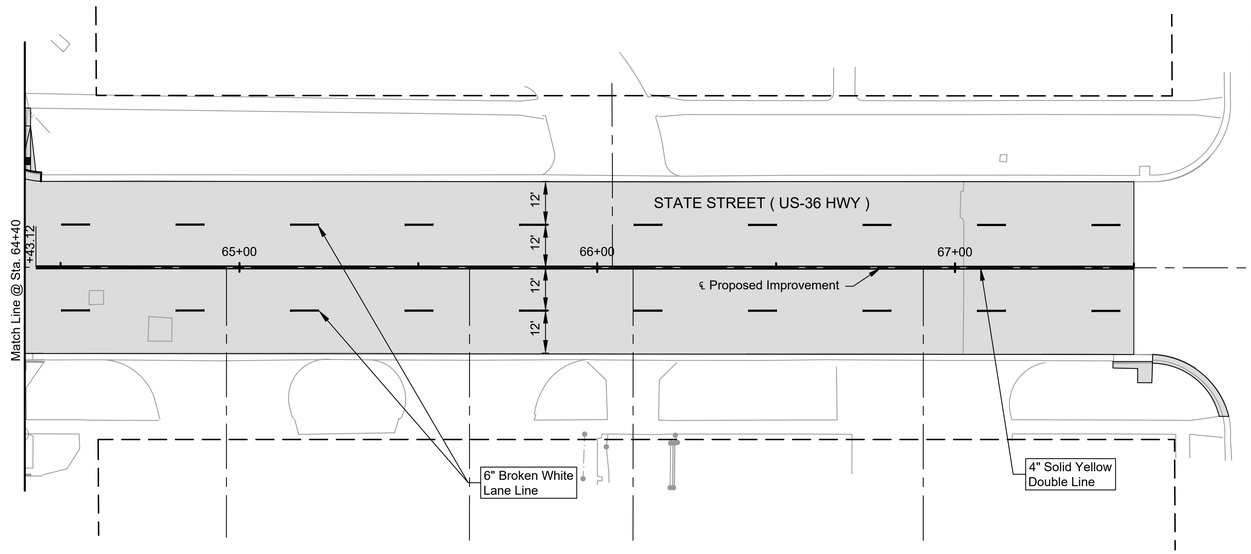
CITY OF PHILLIPSBURG, KANSAS

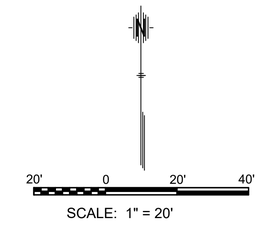
STATE STREET (US-36 HWY)
PAVEMENT MARKING PLAN

BG Project #20-1374M

20-1374M					
	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	36-74 KA-5433-01	2021	34	52

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS





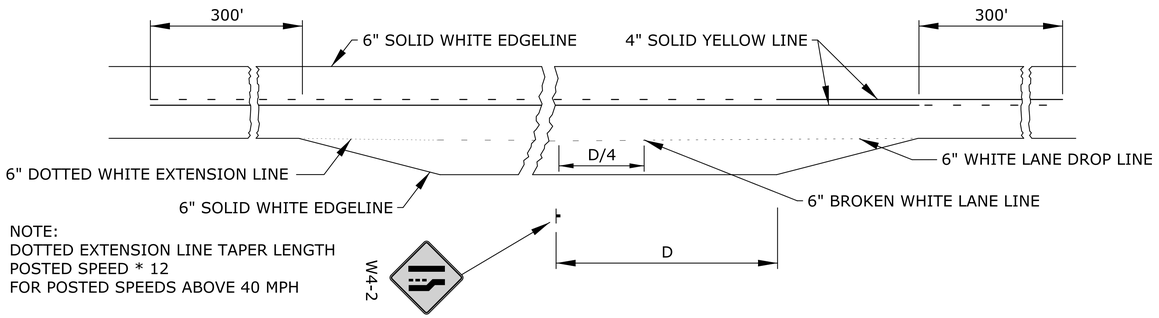
SCALE: 1" = 20'

CITY OF PHILLIPSBURG, KANSAS

STATE STREET (US-36 HWY)
PAVEMENT MARKING PLAN

BG Project #20-1374M

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	35	52

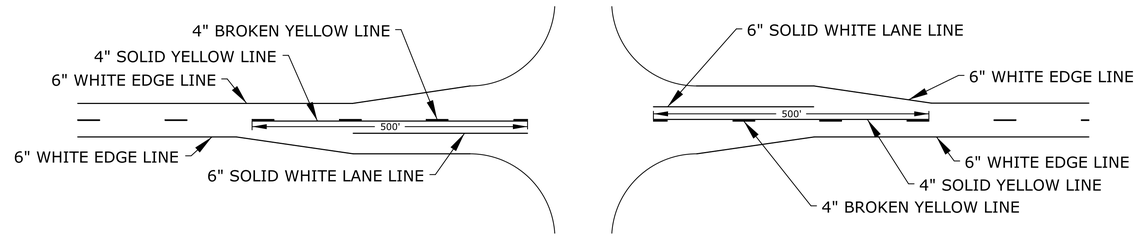


NOTE:
DOTTED EXTENSION LINE TAPER LENGTH
POSTED SPEED * 12
FOR POSTED SPEEDS ABOVE 40 MPH

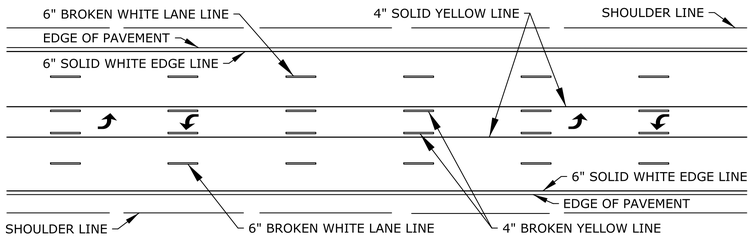
TYPICAL MARKING FOR AUXILIARY PASSING LANE

NOTE:
ALL PAVEMENT MARKINGS SHALL BE BROKEN AT CROSS ROADS.

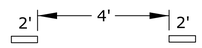
FOR HIGHWAY JUNCTIONS THE NO PASSING ZONE WILL EXTEND 1000' FROM INTERSECTION.



TYPICAL ROAD JUNCTION MARKINGS WITH BYPASS LANES

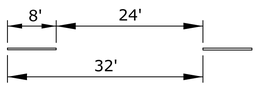


TWO-WAY LEFT TURN DETAIL FOR FIVE LANE ROADWAY

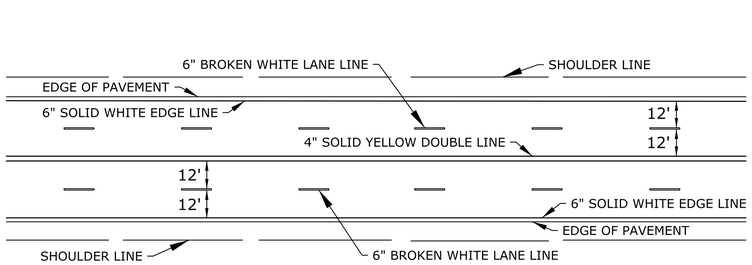


TYPICAL SPACING FOR DOTTED EXTENSION LINES, UNLESS OTHERWISE NOTED ON PLANS.

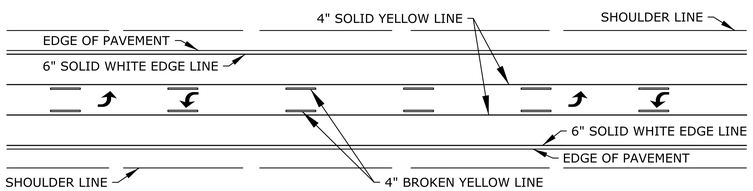
TYPICAL SPACING FOR LANE DROP. UNLESS OTHERWISE NOTED ON PLANS.



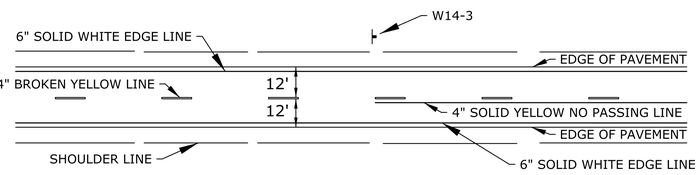
TYPICAL SPACING FOR BROKEN LINES UNLESS OTHERWISE NOTED ON PLANS



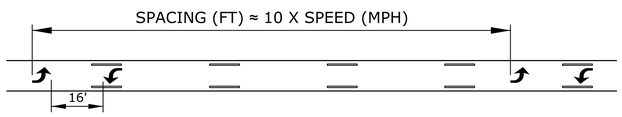
TYPICAL MARKINGS FOR FOUR LANE ROADWAY



TWO-WAY LEFT TURN DETAIL FOR THREE LANE ROADWAY

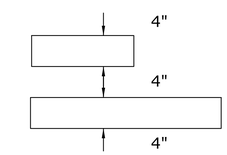


TYPICAL TWO LANE MARKINGS



TWO-WAY LEFT TURN ARROW SPACING DETAIL

NOTE:
IF ARROWS ARE USED SPACE THE ARROWS AS SHOWN IN THE SPACING DETAIL.



TYPICAL SPACING FOR NO PASSING LINES UNLESS OTHERWISE NOTED ON PLANS

NOTE:
LONGITUDINAL PAVEMENT MARKING LINES SHALL BE OFFSET A MINIMUM OF 2" FROM LONGITUDINAL PAVEMENT JOINTS.

NOTE:
ON NON I, US, AND K ROUTES, 4" EDGE LINES MAY BE INSTALLED.
6" EDGE LINES ARE NOT REQUIRED ON NON I, US, AND K ROUTES.

NO.	DATE	REVISIONS	BY	APP'D
3	5/25/12	Added Dotted Extension and Lane Drop Lines	B.A.H.	B.D.G.
2	9/20/05	Removed Aux. Passing Lane Dotted Ext. Line	J.F.F.	B.D.G.
1	7/26/05	New FHWA Approval Date	J.F.F.	B.D.G.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKING DETAILS FOR UNDIVIDED ROADWAYS

TE308

FHWA APPROVAL		5/25/2012	APP'D	Brian D. Gower	
DESIGNED	J.F.F.	DETAILED	J.F.F.	QUANTITIES	TRACED
DESIGN CK.	B.D.G.	DETAIL CK.	B.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 06-20-2012

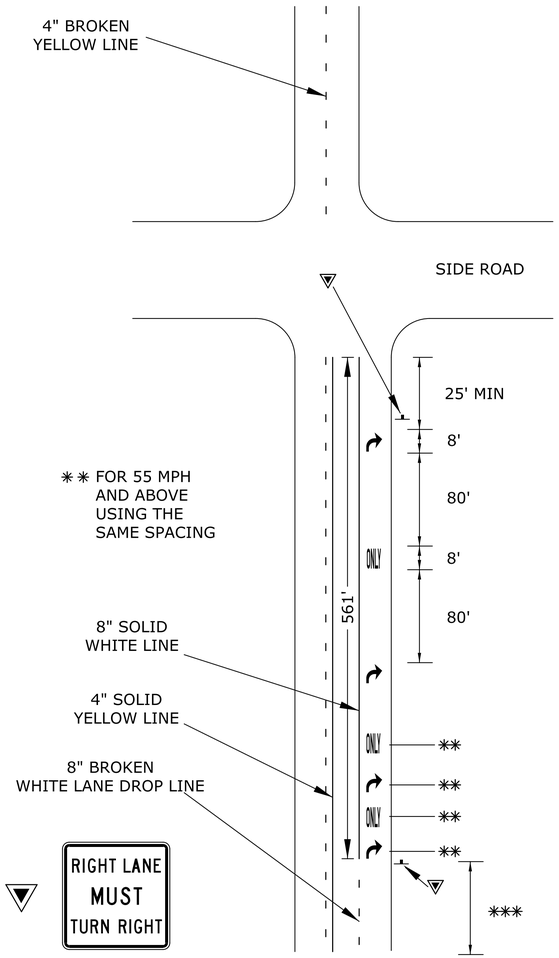
KDOT Graphics Certified

Plotted : 25-JUN-2012 15:42
Traffic

Drawn By : conniee
File : te308.dgn (te308)

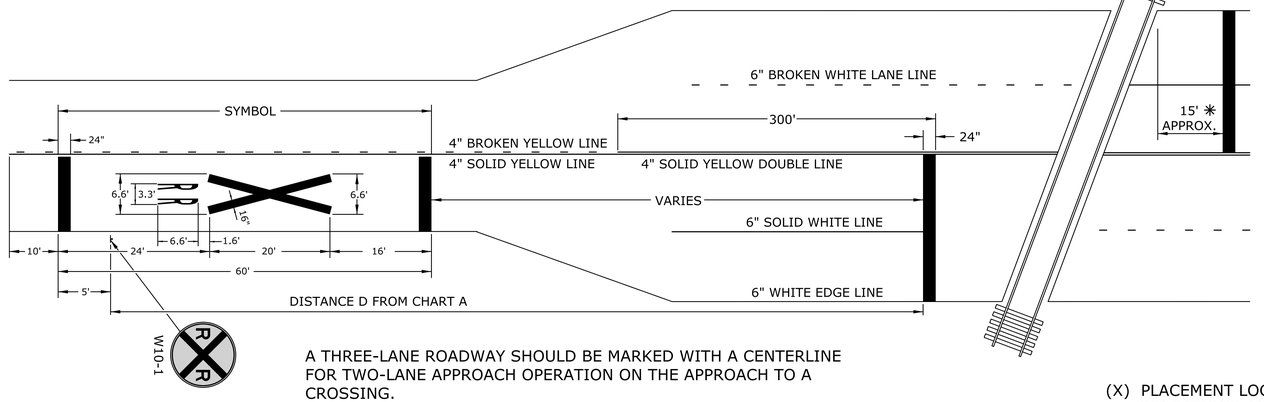
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	36	52

TYPICAL SIGNING AND MARKING FOR RIGHT LANE MUST TURN RIGHT



✳✳✳ THE LANE DROP MARKINGS LENGTH IS A MINIMUM OF 100' AND A MAXIMUM OF 250' PRIOR TO THE 8"SOLID WHITE LINE

RAILROAD CROSSING MARKING



A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.
ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
REFER TO STANDARD ALPHABET FOR HIGHWAY SIGNS AND MARKINGS FOR R X R SYMBOLS DETAILS.

*STOP LINE 8' FROM NEAR EDGE OF GATE OR CANTILEVER, IF PRESENT.

NOTE:
ON NON I, US, AND K ROUTES, 4" EDGE LINES MAY BE INSTALLED.
6" EDGE LINES ARE NOT REQUIRED ON NON I, US, AND K ROUTES.

CHART "A"

SPEED MPH	DISTANCE D (feet)
75	850
70	750
65	650
60	550
55	450
50	375
45	300
40	225
35	150
30	(X)
25	(X)
20	(X)

ALL DISTANCES ARE MINIMUM.

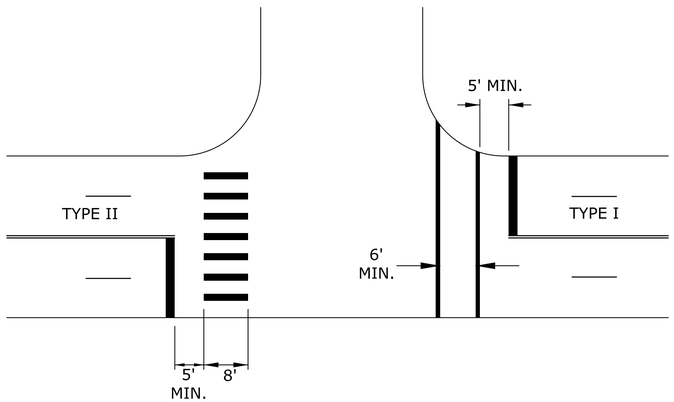
(X) PLACEMENT LOCATION IS DEPENDENT ON SITE CONDITIONS AND OTHER SIGNING TO PROVIDE ADEQUATE ADVANCE WARNING TO THE DRIVER

TYPICAL CROSSWALKS

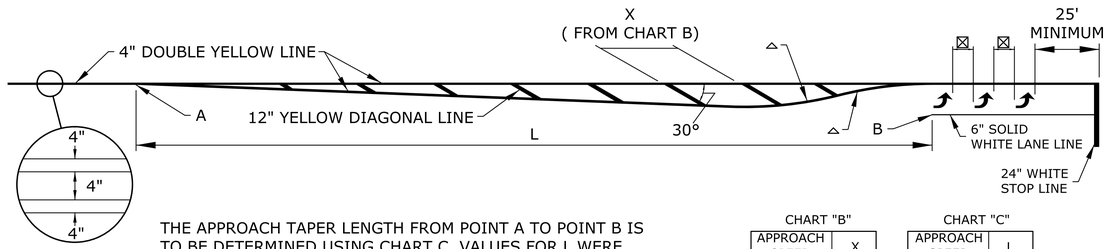
TYPE I: CROSSWALK LINES SHALL BE 12" SOLID WHITE LINES. THEY SHALL BE SPACED A MINIMUM OF 6' APART FROM INSIDE EDGE TO INSIDE EDGE.

TYPE II: THESE LINES SHOULD BE SOLID WHITE 24" WIDE PLACED PARALLEL TO THE DIRECTION OF TRAFFIC FLOW. THE LINE PLACEMENT IS DETERMINED BY LANE LINE,CENTER LINE, AND WHEEL PATH IN SUCH A MANNER AS TO MINIMIZE TRAFFIC WEAR. THE CROSSWALK WIDTH SHOULD BE NOT LESS THAN 8'. THE TRANSVERSE CROSSWALK LINES MAY BE ADDED.

WHEN REQUIRED, STOP LINES SHALL BE INSTALLED A MINIMUM OF 5' FROM CROSSWALKS.



TYPICAL APPROACH TAPER DETAIL



THE APPROACH TAPER LENGTH FROM POINT A TO POINT B IS TO BE DETERMINED USING CHART C. VALUES FOR L WERE CALCULATED USING THE EQUATIONS BELOW AND INCREASED TO THE NEXT HIGHER 5 MPH INCREMENT.

- SPEEDS < 45 MPH $L = \frac{W*S^2}{60}$
- SPEEDS = 45 MPH $L = W*S$

IF ARROWS ARE USED AND UNLESS OTHERWISE SPECIFIED THE SPACE BETWEEN LINES SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTERS FOR LOW SPEED ROADS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS, UNDER ANY CONDITIONS.

FOR SPEEDS LESS THAN OR EQUAL TO 40 MPH, R=150'.
FOR SPEEDS GREATER THAN OR EQUAL TO 45 MPH, R=300'.

CHART "B"

APPROACH SPEED	X
20 MPH	20'
25 MPH	25'
30 MPH	30'
35 MPH	35'
40 MPH	40'
45 MPH	45'
50 MPH	50'
55 MPH	55'
60 MPH	60'
65 MPH	65'
70 MPH	70'

CHART "C"

APPROACH SPEED	L
20 MPH	80'
25 MPH	125'
30 MPH	180'
35 MPH	245'
40 MPH	320'
45 MPH	540'
50 MPH	600'
55 MPH	660'
60 MPH	720'
65 MPH	780'
70 MPH	840'

NO.	DATE	REVISIONS	BY	APP'D
3	5/25/12	Updated Chart B and Lane Drop Lines	B.A.H.	B.D.G.
2	10/20/06	RR Xing Symbol Changed from 18' to 16'	T.L.H.	B.D.G.
1	9/20/05	Added 4" Solid Yellow Double Line to RRxing	J.F.F.	B.D.G.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL MISCELLANEOUS PAVEMENT MARKING DETAIL SHEET

TE309

FHWA APPROVAL		7/26/2005	APP'D	Brian D. Gower	
DESIGNED	J.F.F.	DETAILED	J.F.F.	QUANTITIES	TRACED
DESIGN CK.	B.D.G.	DETAIL CK.	B.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 06-26-2012

Plotted : 26-JUN-2012 08:41
Traffic
Drawn By : conniee
File : te309.dgn (te309)

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	37	52

SUMMARY OF PAVEMENT MARKINGS

LOCATION	4" Solid WHITE Edge Line	6" Solid WHITE Edge Line	6" Broken WHITE Lane Line	6" Broken WHITE Lane Line (PCP)	6" Dotted WHITE Extension Line	6" Broken WHITE Lane Drop Line	6" Solid WHITE Lane Line	8" Broken WHITE Lane Drop Line	8" Solid WHITE Gore Line	8" Dotted WHITE Extension Line	12" Solid WHITE Diagonal Line	12" Solid WHITE Chevron Line	12" Solid WHITE Type I Crosswalk Line	24" Solid WHITE Type II Crosswalk Line	24" Solid WHITE Stop Line	4" Solid YELLOW Edge Line	4" Solid YELLOW Double Line	4" Solid YELLOW Line	4" Broken YELLOW Line	6" Solid YELLOW Edge Line	12" Solid YELLOW Diagonal Line
ADDITIVE BID QUANTITIES																					
55+00 to 55+53.00			106.00														53.00				
55+58.00 to 55+66.00														64.00							
56+56.60 to 59+50.00			586.80														293.4				
ADDITIVE BID SUBTOTALS			692.80											64.00			346.4				
			÷4														X2				
ADDITIVE BID TOTALS			173.2											64.00			692.8				
BASE BID QUANTITIES																					
59+50.00 to 59+81.00			62.00														31.00				
60+38.70 to 60+46.78														64.00							
60+51.77 to 63+51.22			598.90														299.45				
63+54.64 to 63+66.30														64.00							
64+43.12 to 67+50.00			613.76														306.88				
TRAFFIC CONT. (BEGIN - PROJ. BEGIN)			1,180.00														590.00				
TRAFFIC CONTROL (67+50.00 TO END)			1,180.00														590.00				
BASE BID SUBTOTALS			3,634.66											128.00			1817.33				
			÷4														X2				
BASE BID TOTALS			908.67											128.00			3,634.66				

RECAPITULATION OF QUANTITIES

ITEMS	ADDITIVE TOTAL	BASE TOTAL	UNITS
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(4")			FT
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(6")	174	909	FT
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(8")			FT
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(12")			FT
PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(4")	693	3,635	FT
PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(6")			FT
PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(12")			FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(4")			FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(6")			FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(8")			FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(12")			FT
PAVEMENT MARKING (THERMOPLASTIC)(YELLOW)(4")			FT
PAVEMENT MARKING (THERMOPLASTIC)(YELLOW)(6")			FT
PAVEMENT MARKING (THERMOPLASTIC)(YELLOW)(12")			FT
PAVEMENT MARKING (EPOXY)(WHITE)(4")			FT
PAVEMENT MARKING (EPOXY)(WHITE)(6")			FT
PAVEMENT MARKING (EPOXY)(WHITE)(8")			FT
PAVEMENT MARKING (EPOXY)(WHITE)(12")			FT
PAVEMENT MARKING (EPOXY)(YELLOW)(4")			FT
PAVEMENT MARKING (EPOXY)(YELLOW)(6")			FT
PAVEMENT MARKING (EPOXY)(YELLOW)(12")			FT
PAVEMENT MARKING (INTERSECTION GRADE)(WHITE)(12")			FT
PAVEMENT MARKING (INTERSECTION GRADE)(WHITE)(24")	64	128	FT
PAVEMENT MARKING (INTERSECTION GRADE)(YELLOW)(12")			FT
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)( )			EACH
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)( )			EACH
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)( )			EACH
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)( )			EACH
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)( )			EACH
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(US-SHIELD)( )			EACH
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(K-SHIELD)( )			EACH
PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(I-SHIELD)( )			EACH
PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(6")			FT
PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(8")			FT
PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(12")			FT
PAVEMENT MARKING REMOVAL			FT

SUMMARY OF WORD & SYMBOL MARKINGS

LOCATION	STOP	ONLY	X-ING	SCHOOL	70	435	24	400	18
TOTALS									

NOTE: FOR SPECIFIC PAVEMENT MARKING DETAILS AND DIMENSIONS SEE PLAN SHEETS

NOTE: ALL TOTALS REFLECT ACTUAL QUANTITY OF PAVEMENT MARKING MATERIALS REQUIRED.

NOTE:
WORDS & SYMBOLS SHALL CONFORM TO THE LATEST EDITION OF "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" PRINTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

PRIOR TO COMMENCEMENT OF PAVEMENT MARKING WORK THE ENGINEER WILL ESTABLISH THE LIMITS FOR "NO PASSING" ZONES. THESE LIMITS SHALL BE USED FOR THE LOCATION OF "NO PASSING" LINES AND FOR THE COMPUTATION OF ACTUAL MARKING QUANTITIES FOR THIS LINE TYPE.

NO.	DATE	REVISIONS	BY	APP'D
2	5/25/12	Added Line Types, Symbols, and Shields	B.A.H.	B.D.G.
1	7/26/05	New FHWA Approval Date	J.F.F.	B.D.G.

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY AND RECAPITULATION OF PAVEMENT MARKING QUANTITIES

TE311

FHWA APPROVAL		5/25/2012	APP'D	Brian D. Gower	
DESIGNED	J.F.F.	DETAILED	J.F.F.	QUANTITIES	TRACED
DESIGN CK.	B.D.G.	DETAIL CK.	B.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 06-20-2012

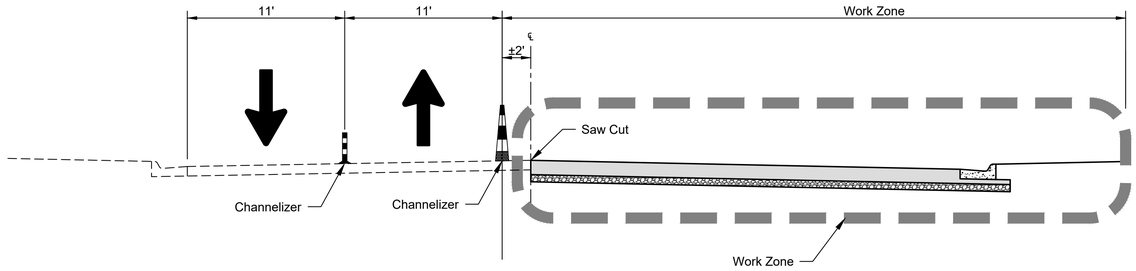
KDOT Graphics Certified

Plotted : 25-JUN-2012 15:43
Traffic

Drawn By : conniee
File : te311.dgn (te311)

20-1374M	STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	36-74 KA-5433-01	2021	38	52

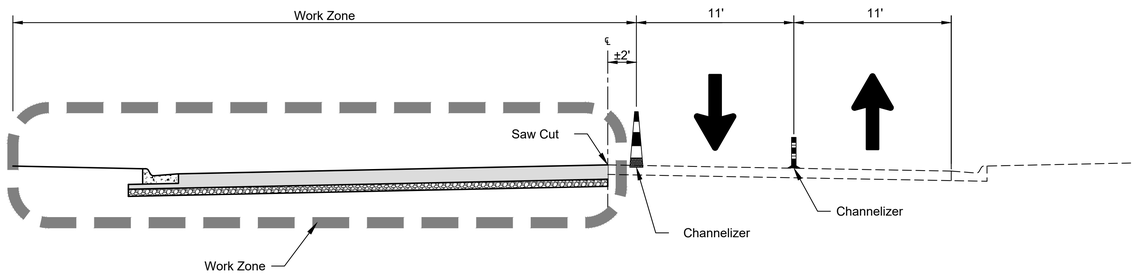
BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS



PHASE 1 - TYPICAL SECTION STATE STREET(US-36)

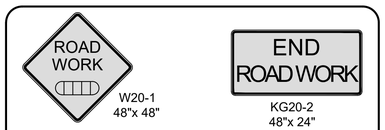
(Not to Scale)
Looking East
See Traffic Control Plan Phase 1 for locations

See KDOT Standard TE705 for maintaining access to entrances/intersections during construction. Discontinue channelizers on the temporary double yellow centerline at entrances/intersections.



PHASE 2 - TYPICAL SECTION STATE STRET (US-36)

(Not to Scale)
Looking East
See Traffic Control Plan Phase 2 for locations



BASIC TRAFFIC CONTROL SIGNING

All Public Streets that remain open to the traveling public during construction shall have, at a minimum, a "ROAD WORK AHEAD" sign in advance of the work zone and an "END ROAD WORK" sign 500 feet downstream of the last temporary traffic control device.

These signs may not be shown on the Work Zone Traffic Control plans, but nevertheless shall be required.

TRAFFIC CONTROL NOTES

1. The Contractor has the option of developing their own traffic control plan and submitting it to the Owner for review and approval (at least two weeks prior to proposed implementation).
2. All traffic control devices (signs, barricades, drums, channelizers, etc.) shall be provided, erected and maintained by the Contractor and shall conform to the most recent Manual on Uniform Traffic Control Devices (MUTCD), the KDOT TE Standards, and the AASHTO Roadside Design Guide, whichever is most stringent. The Contractor shall be responsible for maintaining in position, cleaning, and replacing damaged traffic control devices.
3. The Engineer shall determine the final location of all traffic control devices.

CONSTRUCTION PHASING PLAN

The following is the conceptual phasing for construction as developed by the Engineer. The Contractor has the option of developing their own sequencing plan and submitting it to the Owner for review and approval (at least two weeks prior to proposed implementation).

Phase #1:
Phase #1 shall consist of street, and sidewalk on the south side of US-36 as well as the entire waterline. Phase #1 is expected to commence with sawcutting and removing the south portion of the existing highway pavement, grading on the south side of US-36, the waterline, and then construction of the pavement, curb/gutter, driveway/street approaches on the south side of US-36.

Phase #2:
Phase #2 shall consist of street and sidewalk on the north side of US-36. Phase #2 is expected to commence with the removal of the north portion of the existing highway pavement, and grading on the north side of US-36, and then construction of the pavement, curb/gutter, and driveway/street approaches on the north side of US-36.

BG Project #20-1374M

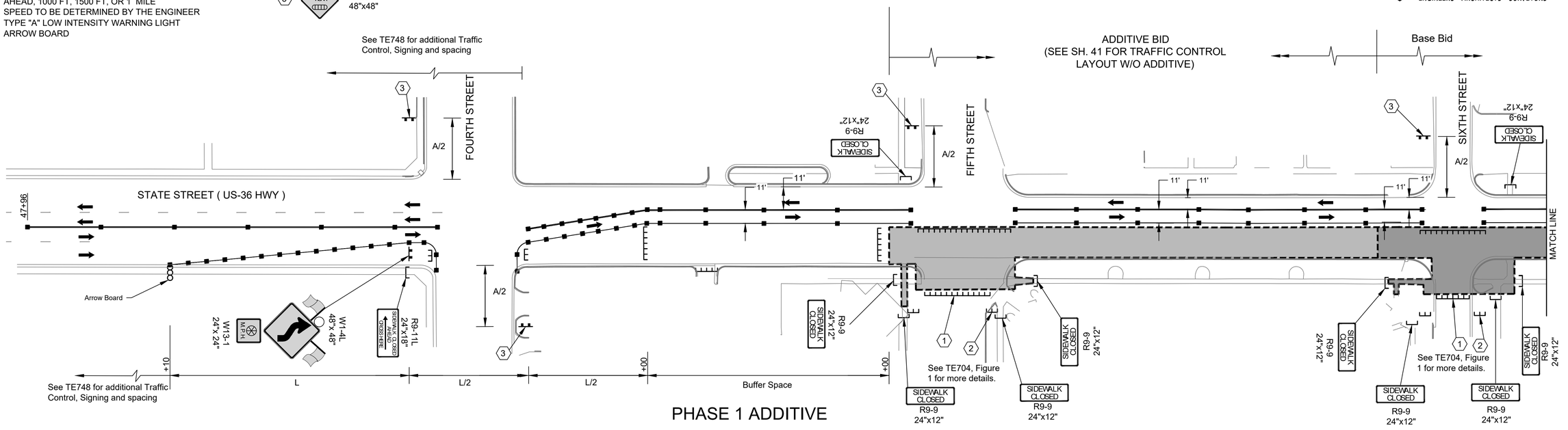
CITY OF PHILLIPSBURG, KANSAS
TRAFFIC CONTROL PLAN
GENERAL NOTES &
TYPICAL SECTIONS

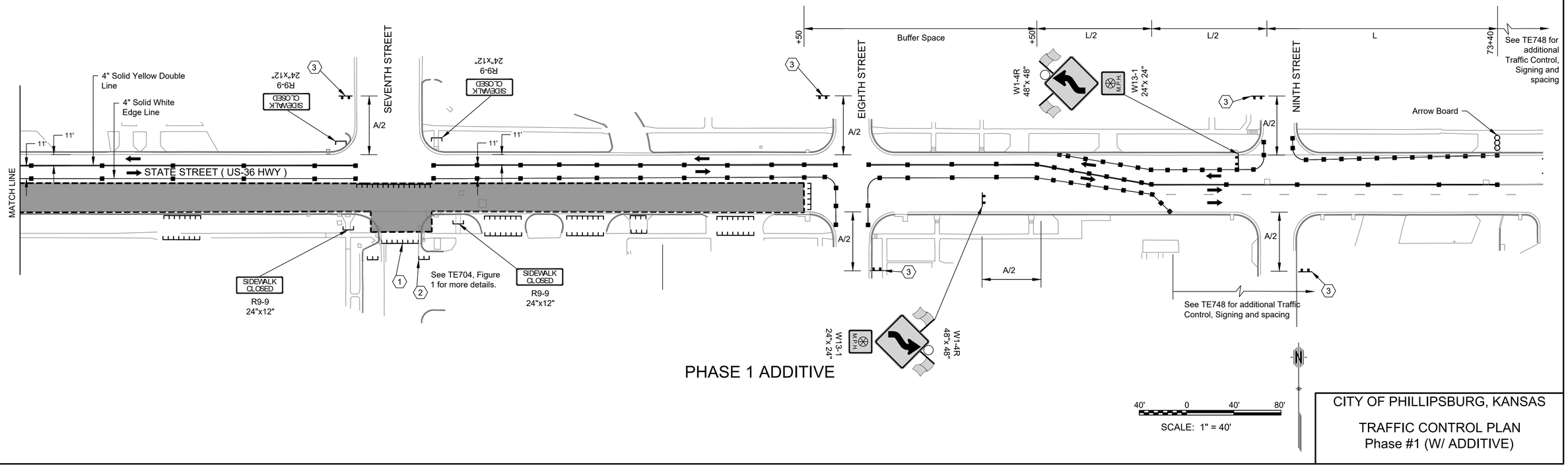
20-1374M				
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	39	52

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

LEGEND
- WORK ZONE
- WORK ZONE SIGN
- DETECTABLE BARRICADE
- TYPE III BARRICADES
- CHANNELIZING DEVICE
- AHEAD, 1000 FT, 1500 FT, OR 1 MILE
- SPEED TO BE DETERMINED BY THE ENGINEER
- TYPE "A" LOW INTENSITY WARNING LIGHT
- ARROW BOARD

1. ROAD CLOSED — R11-2 48"x30"
2. ROAD CLOSED TO THRU TRAFFIC — R11-4 48"x30"
3. ROAD WORK AHEAD — W20-1 48"x48"





40' 0 40' 80'
SCALE: 1" = 40'

CITY OF PHILLIPSBURG, KANSAS

TRAFFIC CONTROL PLAN
Phase #1 (W/ ADDITIVE)

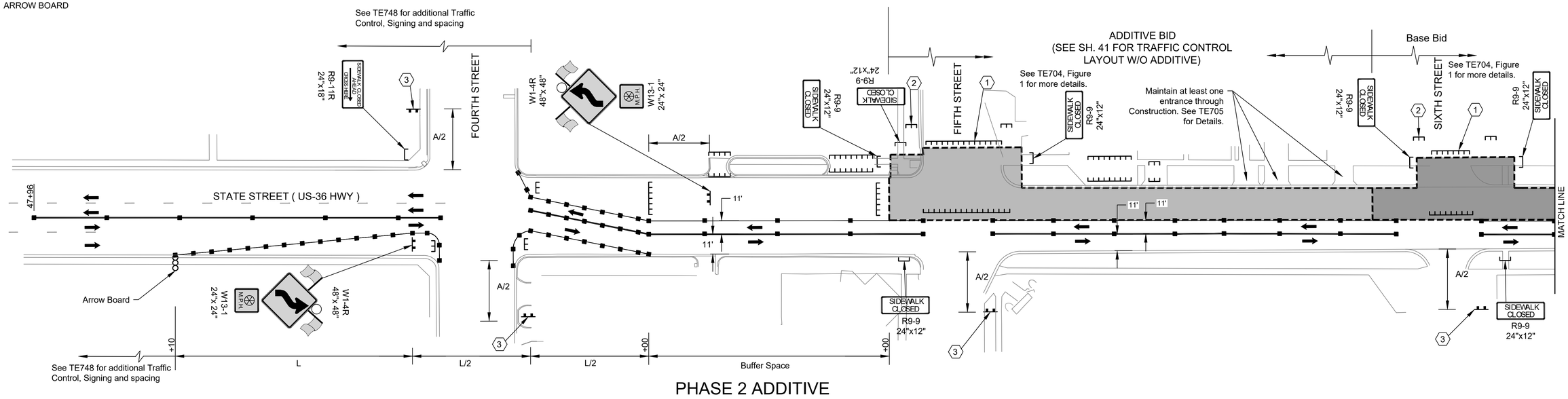
BG Project #20-1374M

20-1374M					
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	40	52

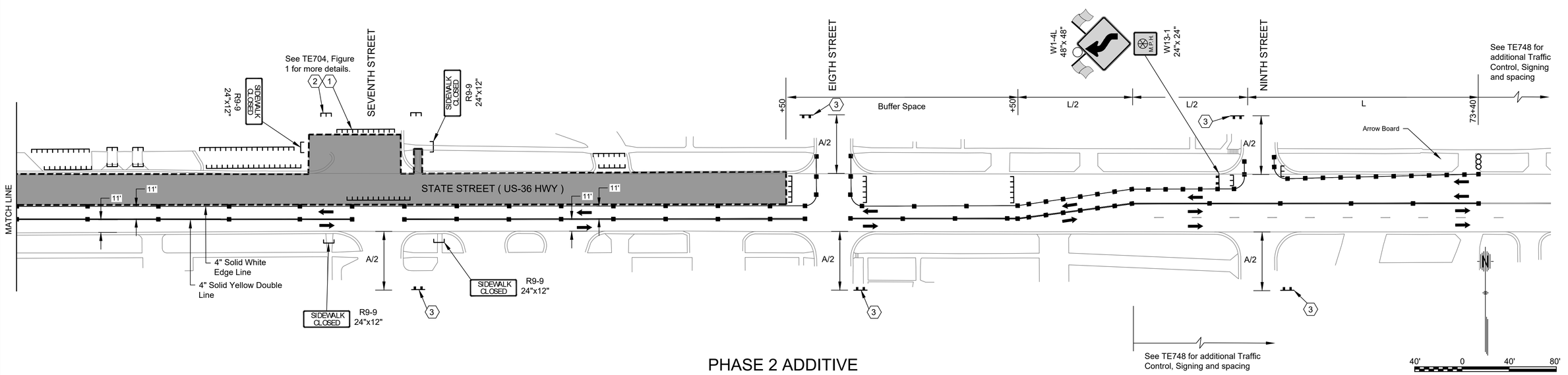
BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

LEGEND
- WORK ZONE
- WORK ZONE SIGN
- DETECTABLE BARRICADE
- TYPE III BARRICADES
- CHANNELIZING DEVICE
- AHEAD, 1000 FT, 1500 FT, OR 1 MILE
- SPEED TO BE DETERMINED BY THE ENGINEER
- TYPE "A" LOW INTENSITY WARNING LIGHT
- ARROW BOARD

1. ROAD CLOSED — R11-2 48"x30"
2. ROAD CLOSED TO THRU TRAFFIC — R11-4 48"x30"
3. ROAD WORK AHEAD — W20-1 48"x48"



PHASE 2 ADDITIVE



PHASE 2 ADDITIVE

SCALE: 1" = 40'

CITY OF PHILLIPSBURG, KANSAS

TRAFFIC CONTROL PLAN
Phase #2 (W/ ADDITIVE)

BG Project #20-1374M

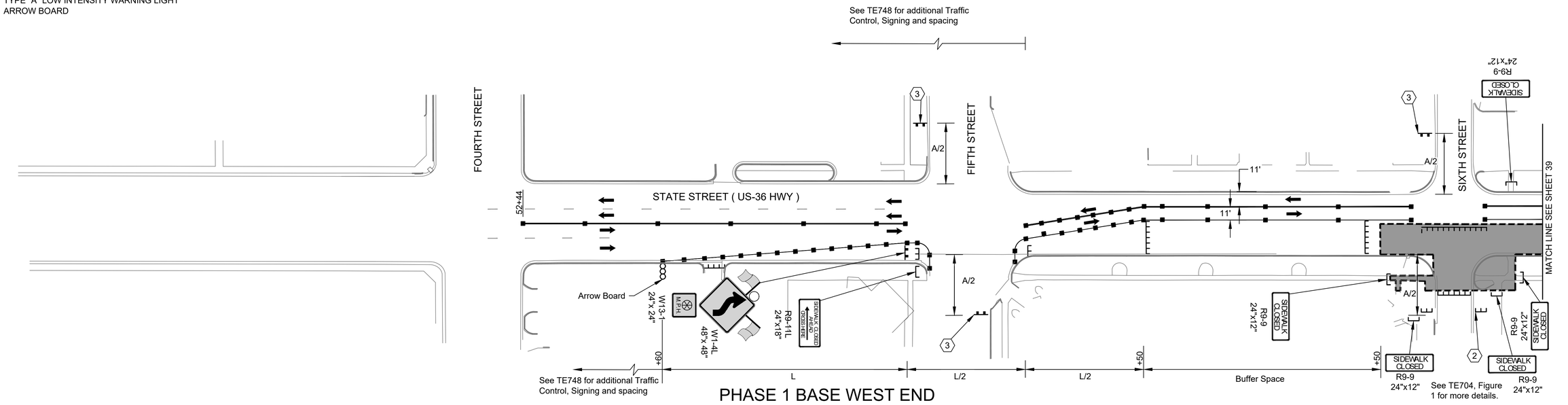
LEGEND

- WORK ZONE
- WORK ZONE SIGN
- DETECTABLE BARRICADE
- TYPE III BARRICADES
- CHANNELIZING DEVICE
- AHEAD, 1000 FT, 1500 FT, OR 1 MILE
- SPEED TO BE DETERMINED BY THE ENGINEER
- TYPE "A" LOW INTENSITY WARNING LIGHT
- ARROW BOARD

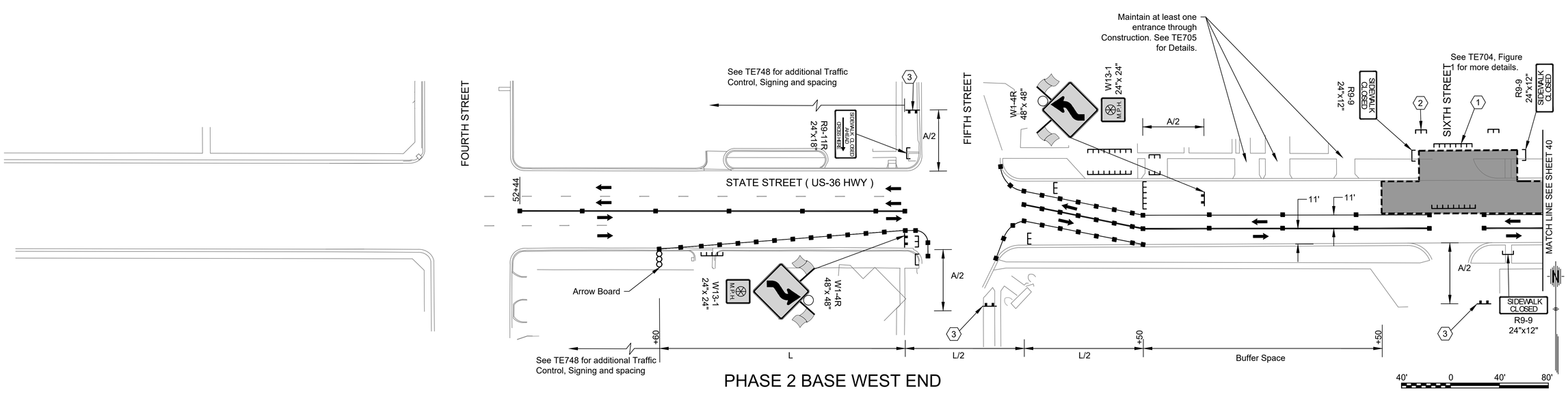
1. ROAD CLOSED — R11-2 48"x30"
2. ROAD CLOSED TO THRU TRAFFIC — R11-4 48"x30"
3. ROAD WORK AHEAD — W20-1 48"x48"

20-1374M				
STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	41	52

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS



PHASE 1 BASE WEST END



PHASE 2 BASE WEST END

SCALE: 1" = 40'

CITY OF PHILLIPSBURG, KANSAS

TRAFFIC CONTROL PLAN
(W. END W/O ADDITIVE)

BG Project #20-1374M

1) Design Speed: Those items delegated to temporary traffic control should be designed and installed using the posted/legal speed of the roadway prior to work starting.

2) Minimum Lane Width: Lane widths shall be a minimum of 11' (measured between centerlines of pavement markings) or as shown on the plans, or as directed by the engineer. A lane width less than 11' may require restricted roadway width signing.

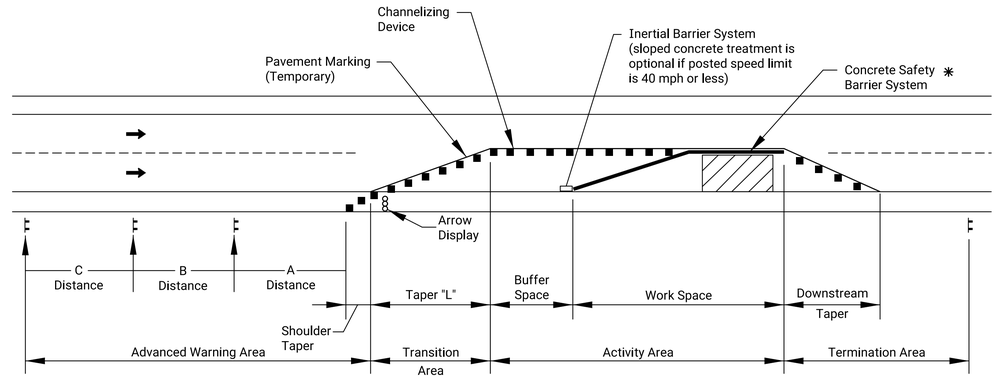
3) Consideration should be made to separate pedestrian and, if needed, bicycle movements from both work site activity and vehicular traffic. Unless a reasonable safe route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

5) When the driving surface open to traffic is milled or is a temporary surface made of loose material, or when directed by the engineer a W8-15 (Grooved Pavement) or W8-7 (Loose Gravel) sign shall be used on mainline approaches. This sign should be placed a "C" distance after the W20-1 (Road Work Ahead) sign. A W8-15p motorcycle plaque shall be used to supplement the W8-15 or W8-7 signs. All signs shall be displayed as long as the condition is present.

6) Alternative temporary rumble strip options may be available. Please contact the Temporary Traffic Control Unit for more information at 785-296-1179 or 785-296-1183.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	42	52



TYPICAL WORK ZONE COMPONENTS

✳ When concrete barrier system is used, portable channelizing devices are not needed along the tangent barrier section.

Minimum advance warning sign spacing (in feet):

SPEED (MPH) ✳	*A*	*B*	*C*
URBAN (40 MPH OR LOWER)	*100*	*100*	*100*
URBAN (45 MPH OR HIGHER)	*350*	*350*	*350*
RURAL (55 MPH OR LOWER)	*500*	*500*	*500*
RURAL (60 MPH OR HIGHER)	*750*	*750*	*750*
EXPRESSWAY/FREEWAY	*1000*	*1500*	*2640*

✳ Posted speed prior to work starting

The minimum spacing between signs shall be no less than 100', unless directed by the engineer.

The spacing between any signs may be increased beyond the minimum values in the table above as approved by the engineer in order to maximize visibility.

Taper Formulas:

L = WS for speeds of 45 MPH or more

$L = WS^2/60$ for speeds of 40 MPH or less

Where: L = Minimum length of taper in feet
S = Numericial value of posted speed prior to work starting in MPH
W = Width in offset feet

Shifting Taper=1/2 L
Shoulder Taper=1/3 L

Channelizer Placement:

(1) The spacing between devices in transition area (taper) should not exceed a distance in feet equal to 1/2 the posted speed limit in mph prior to work starting.

(2) The spacing between devices in the advanced warning area and the activity area should not exceed a distance in feet equal to two times the posted speed limit in mph prior to work starting.

(3) Channelizing devices shall be placed for optimum visibility, normally at right angles to the traffic flow.

(4) Place directional indicator barricades in series to direct traffic onto the new path. The arrow sign should not be visible to opposing traffic.

(5) Alternating diagonal orange and white striping must slope downward in the direction traffic is expected to pass.

Buffer Space

SPEED (MPH) ✳	*20*	*25*	*30*	*35*	*40*	*45*	*50*	*55*	*60*	*65*	*70*	*75*
LENGTH (ft)	*115*	*155*	*200*	*250*	*305*	*360*	*425*	*495*	*570*	*645*	*730*	*820*

✳ Posted speed prior to work starting

Neither work activity nor storage of equipment, vehicles, or material should occur in the buffer space. When a protection vehicle is placed in advance of the work space, only the space upstream of the vehicle constitutes the buffer space.

If temporary concrete safety barrier system is used to separate approaching traffic from the work space, the barrier system shall be considered part of the activity area. A full lane width should be available throughout the length of the buffer space. See typical work zone components above.

NO.	DATE	REVISIONS	BY	APP'D
3				
2	03/13/18	W8-15p usage changed to Shall	R.W.B.	E.G.K.
1	08/18/15	Channelizer spacing info	R.W.B.	K.E.

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
GENERAL NOTES

TE700

FHWA APPROVAL			03/13/18	APP'D	Eric Kocher
DESIGNED	B.A.H.	DETAILED	R.W.B	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

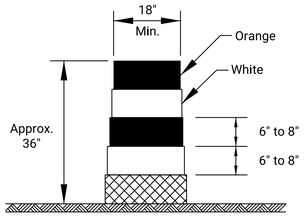
KDOT Graphics Certified 03-13-2018

KDOT Graphics Certified

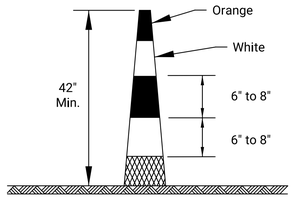
Plotted :29-MAR-2018 12:40
Traffic

Drawn By : mushock
File : te700.dgn

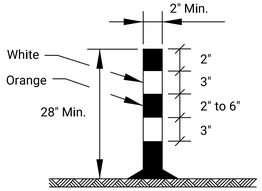
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	43	52



DRUM

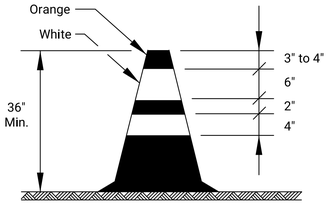


CONICAL DELINEATOR

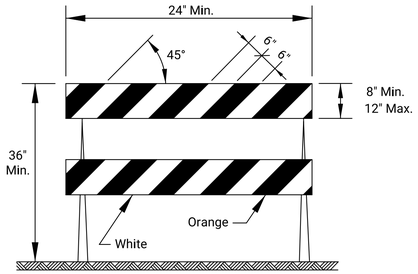


TUBULAR MARKER

Striping as shown for up to 42".

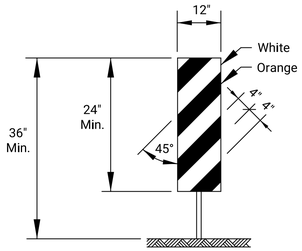


TRAFFIC CONE



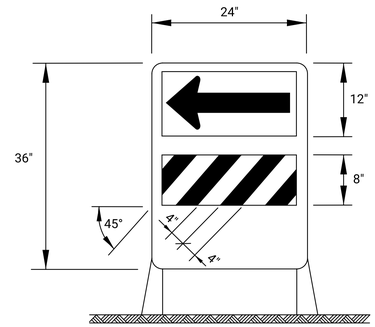
TYPE 2 BARRICADE

For rails less than 36" long, 4" wide stripes may be used. All stripes shall slope downward to the traffic side for channelization.



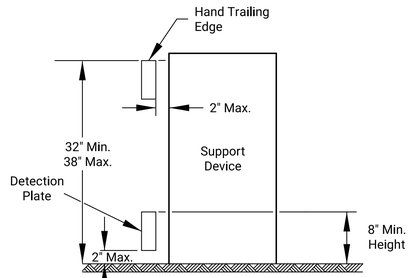
VERTICAL PANEL

The stripes shall slope downward to the traffic side for channelization.



DIRECTION INDICATOR BARRICADE

The stripes shall slope downward in the direction traffic is to pass. The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.



PEDESTRIAN CHANNELIZER

1. Support device shall not project beyond the detection plate into the pathway.
2. Hand trailing edges and detection plates are optional for continuous walls.
3. Interconnect pedestrian channelizers to prevent displacement and to provide continuous guidance through or around work.
4. Alternate pathways shall be firm, stable, and slip resistant.
5. Treat height differentials > 1/2" in the surfaces of alternate paths with a firm, stable, and slip resistant temporary ramp having a slope of 12:1 or flatter and having a width equal to the alternate path.
6. Use alternating orange/white on interconnected devices.

Item	Location	Cross-overs	Shoofly Diversions	Tangents	Tapers	Ramps	Head to Head	Object Identifier	Lead-in Devices	Gores
Portable										
	Drums	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Conical Delineators	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Vertical Panels	(2)	(2)	(2)	(2)	(2)	(1,2)	Yes	(2)	(2)
	Direction Indicator Barricade	No	No	No	Yes	No	No	No	No	No
	Type 2 Barricade	(2)	(2)	(2)	(2)	No	No	Yes	No	No
	Traffic Cones	No	No	(4)	(4)	(4)	No	(4)	(4)	(4)
Fixed										
	Tubular Markers	(3)	(3)	(3)	No	(3)	Yes	No	Yes	Yes
	Vertical Panels	(3)	(3)	(3)	(3)	(3)	(3)	Yes	(2,3)	(2)

(1) Not allowed on centerline delineation along freeways or expressways.
(2) The stripes shall slope downward to the traffic side for channelization.
(3) May be used upon the approval of the engineer.
(4) Daytime operations only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
CHANNELIZING DEVICES

TE702

FHWA APPROVAL		06/01/15	APP'D	Kristina Ericksen	
DESIGNED	L.E.R.	DETAILED	R.W.B.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 03-29-2018

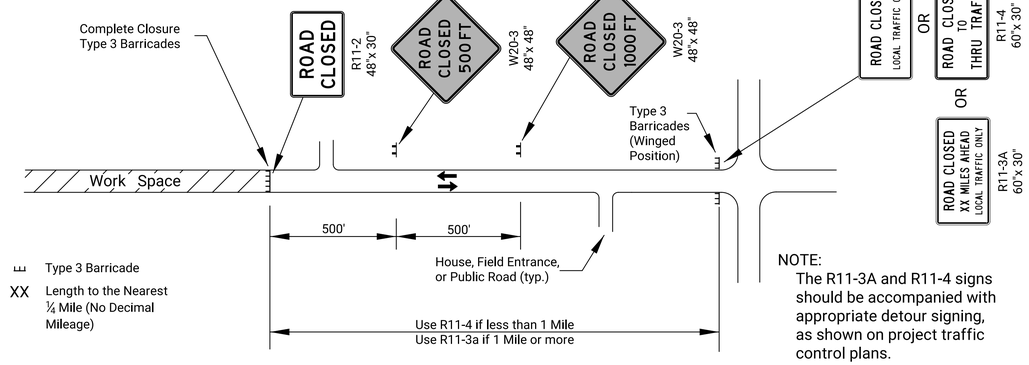
KDOT Graphics Certified

Plotted :29-MAR-2018 12:40
Traffic

Drawn By : mushock
File : te702.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	44	52

Note: Signs shown for one approach to work zone.



NOTE:
The R11-3A and R11-4 signs should be accompanied with appropriate detour signing, as shown on project traffic control plans.

FIGURE 1: TYPICAL SIGNING FOR ROAD CLOSURE (MAINLINE OR SIDE ROAD)

Note: Sign shown for one approach to intersection (work zone).

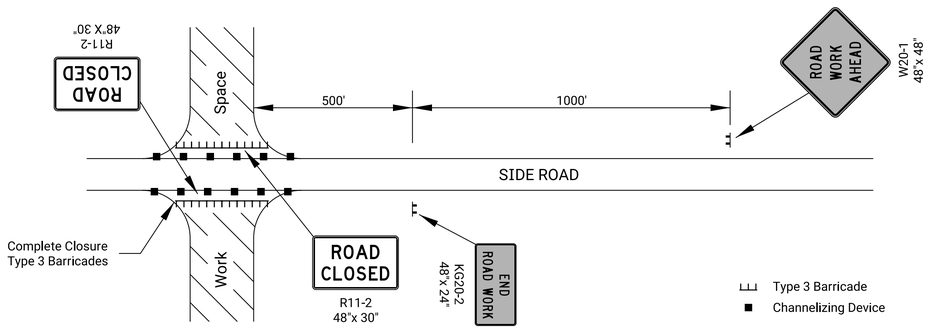


FIGURE 2: TYPICAL SIGNING FOR SIDE ROAD OPEN

Note: Signs shown for one approach to work zone.

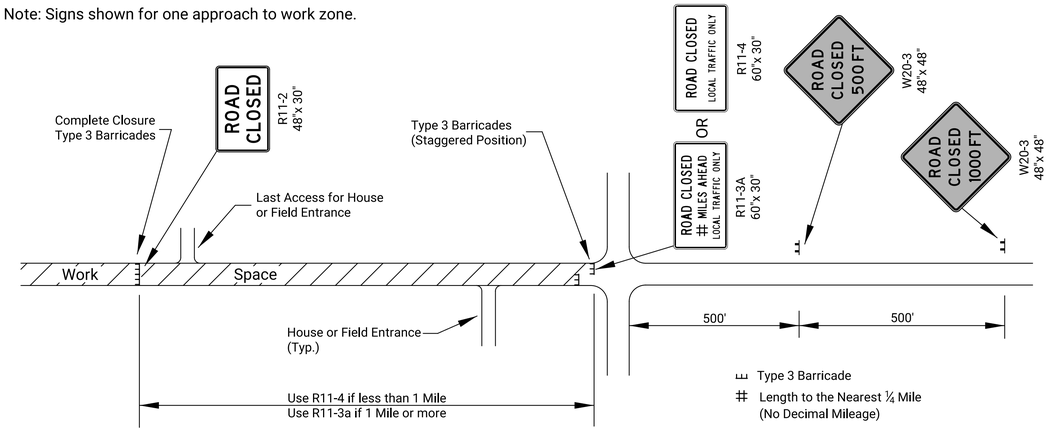


FIGURE 3: TYPICAL SIGNING FOR ROAD CLOSURE - LOCAL TRAFFIC ACCESS

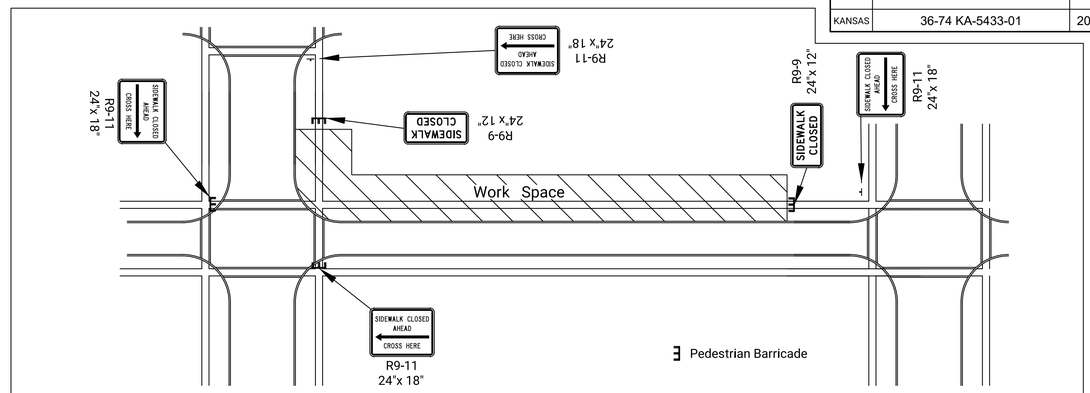
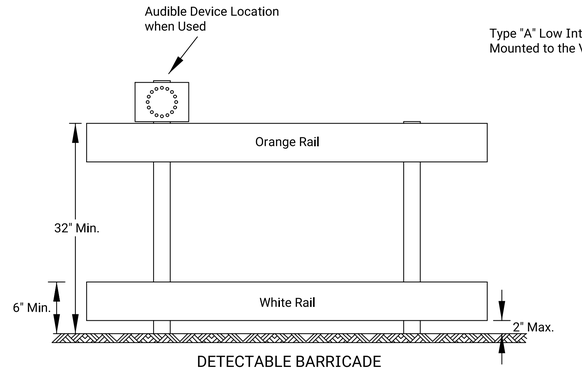
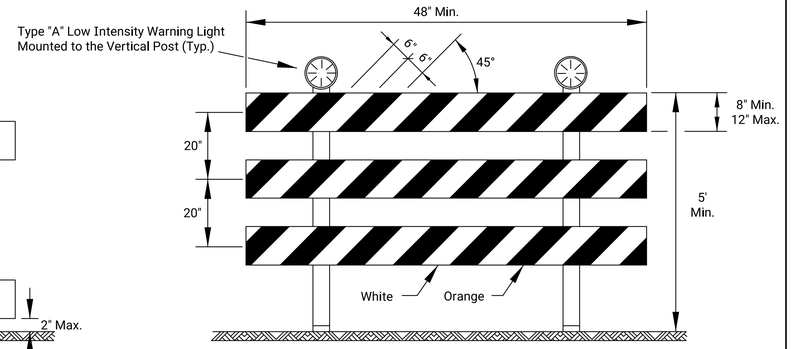


FIGURE 4: TYPICAL SIGNING FOR SIDEWALK CLOSED WITH OPPOSITE SIDEWALK AVAILABLE



DETECTABLE BARRICADE

1. Support device shall not project beyond the detection plate into the pathway.
2. Barricades shall be used to close the entire width of the pathway.
3. Do not use warning lights on pedestrian barricades.
4. Do not use warning lights on audible devices.



TYPE 3 BARRICADE WITH LIGHTS

Approved signs mounted on Type 3 barricades should not cover more than 50% of the top two rails or 33% of the total area of the three rails.

When barricades are placed end-to-end or staggered, a Type "A" low intensity warning light shall be mounted to the vertical post near each outside corner of the end barricades.

ROAD CLOSED GENERAL NOTES

As shown in Figure 1, at the point where thru traffic must detour and local traffic can proceed to the location where the roadway is completely closed, the R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) or R11-4 (ROAD CLOSED LOCAL TRAFFIC ONLY or ROAD CLOSED TO THRU TRAFFIC) sign shall be used with Type 3 barricades (winged position), placed on the shoulders of roadway.

As shown in Figure 3, when local traffic must be allowed access into the work zone, Type 3 barricades shall be longitudinally staggered to maintain the appearance of a closed roadway. A second line of end-to-end Type 3 barricades shall be placed just beyond the last access point in the work zone, to completely close the roadway.

The R11-4 (ROAD CLOSED TO THRU TRAFFIC or ROAD CLOSED LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is less than 1 mile.

The R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is 1 mile or greater.

The words "BRIDGE OUT" (or BRIDGE CLOSED) may be substituted for the words "ROAD CLOSED" on the R11-3a or R11-4 sign where applicable.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL CLOSURES

TE704

FHWA APPROVAL		06/01/15	APP'D	Kristina Ericksen	
DESIGNED	B.A.H.	DETAILED	R.W.B.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

Plotted : 29-MAR-2018 12:40
Traffic

Drawn By : mushock
File : te704.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	45	52

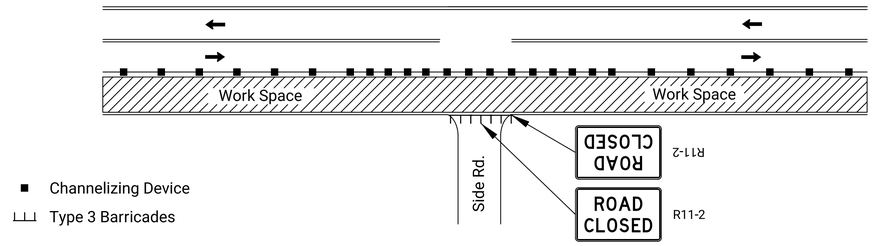


FIGURE 1: SIDE ROAD OR ENTRANCE CLOSED THROUGH WORK AREA

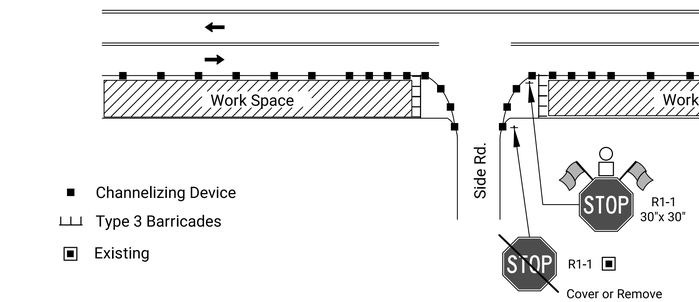


FIGURE 2: SIDE ROAD OR ENTRANCE OPEN THROUGH WORK AREA

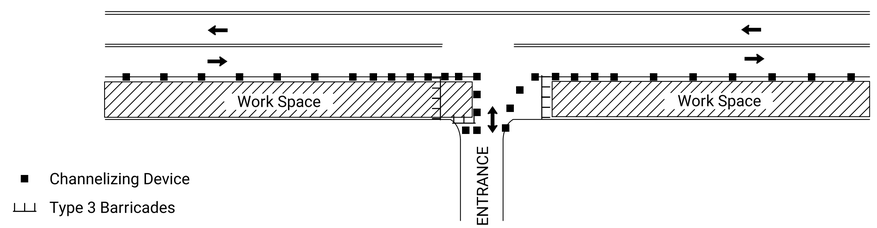


FIGURE 3: LOW VOLUME ENTRANCE CONTRUCTED HALF AT A TIME

Note: Consider large vehicles making right turns into and out of entrance
and use figure 4 as needed

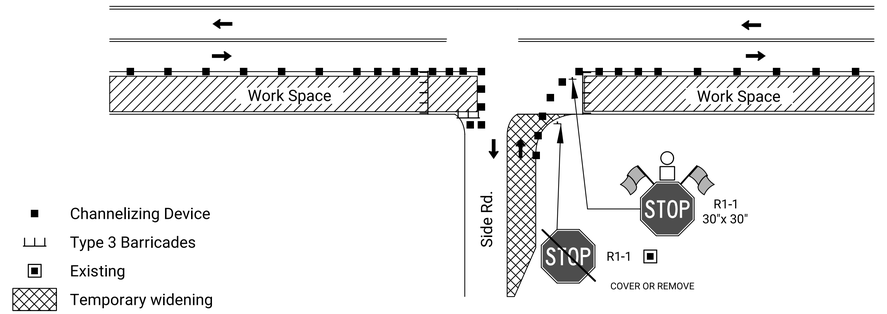


FIGURE 4: SIDE ROAD OR ENTRANCE CONSTRUCTED HALF AT A TIME:
TWO WAY TRAFFIC REQUIRED

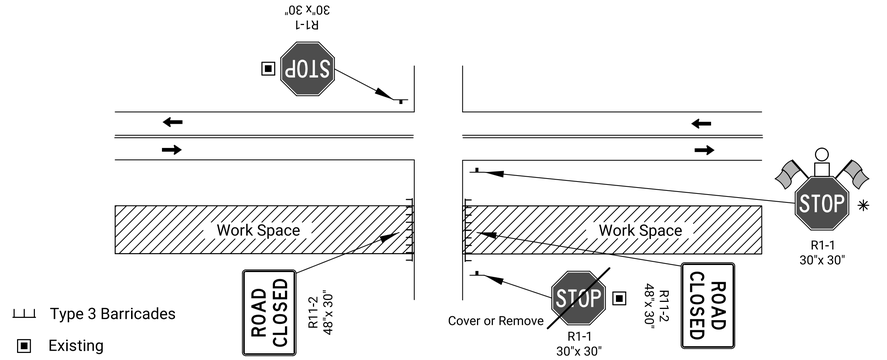


FIGURE 5: SIDE ROAD OPEN THROUGH WORK AREA ON DIVIDED ROADWAY

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
ACCESS THROUGH THE WORK AREA

TE705

FHWA APPROVAL		06/01/15	APP'D	Kristina Ericksen	
DESIGNED	R.W.B.	DETAILED	R.W.B.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

Plotted :29-MAR-2018 12:40
Traffic

Drawn By : mushock
File : te705.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	46	52

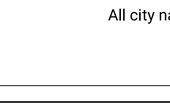
SIGN LAYOUT INFORMATION

END ROAD WORK
KG20-2
Std. Size Expwy/Freeway
6" C
48"x 24"

WAIT FOR PILOT CAR
KG20-5
Std. Size Expwy/Freeway
6" C
48"x 24"

WORK ZONE
KM4-20
Std. Size: 3" C, 24"x 6"
Expwy/Freeway: 6" C, 48"x 12"

NEXT X MILES
W7-3a
Mileage to be Determined by the Engineer.


W8-17
Std. Size Expwy/Freeway
48"x 48"

GROOVED PAVEMENT
W8-15
Std. Size Expwy/Freeway
8" D
48"x 48"

LOOSE GRAVEL
W8-7
Std. Size Expwy/Freeway
8" D
48"x 48"


W8-15p
Std. Size Expwy/Freeway
30"x 24"

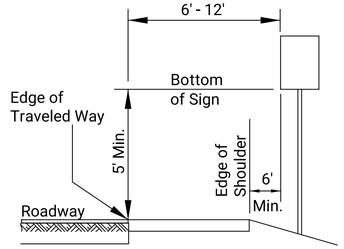
UNEVEN LANES
W8-11
Std. Size Expwy/Freeway
8" D
48"x 48"

SHOULDER DROP-OFF
W8-17P
(Optional)
Std. Size Expwy/Freeway
30"x 24"

NB US-75 CLOSED FOLLOW DETOUR
SP-01
(Special Sign)
Std. Size: 6" C
Expwy/Freeway: 10" D

US-75 CLOSED NORTH OF Topeka FOLLOW DETOUR
SP-02
(Special Sign)
Std. Size: Uppercase: 6" C; Lowercase: 4.5" C
Expwy/Freeway: Uppercase: 10" D; Lowercase: 8" D

All city names and street names on special signs and destination signs must have upper and lower case letters.

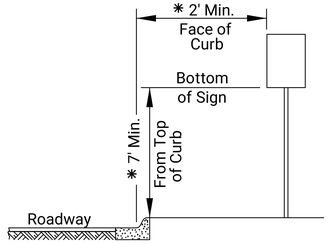


RURAL

1) Ground-mounted signs shall be mounted at a minimum height of 5' measured from the bottom of sign to the near edge of the pavement.

2) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

3) The height of the secondary sign mounted below another sign may be 4' measured from the bottom of the sign to the near edge of the pavement. Signs shall not overlap each other.



URBAN

1) Signs shall be mounted at a minimum height of 7' measured from the bottom of sign to the near edge of the pavement.

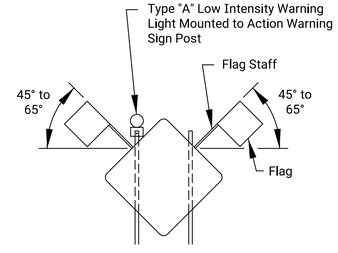
2) Neither portable nor permanent sign supports should be located on sidewalks or areas designated for pedestrian or bicycle traffic.

3) Signs mounted lower than 7' should not project more than 4" into pedestrian facilities.

4) The height from of the secondary sign mounted below another sign may be 6' measured from the bottom of sign to the near edge of the pavement. Signs shall not overlap each other.

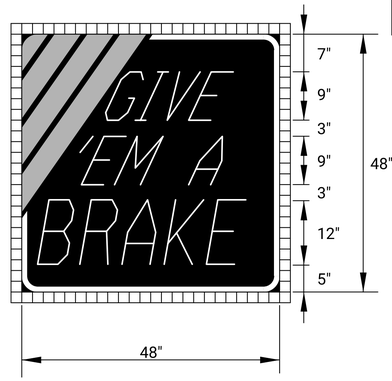
5) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

* 6) Pedestrian detour signing shall be a minimum of 2' measured from the top of the pedestrian pathway to the bottom of the sign and shall not protrude into the walkway nor shall it project beyond the back of curb.



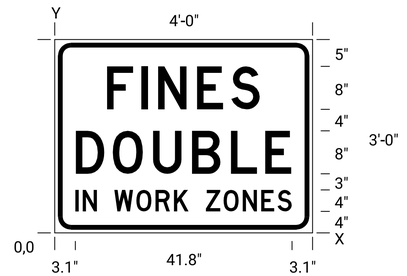
When the sign width is equal to or greater than 9', three or more wood posts may be used with a minimum of 4' between the centerline of each post. All signs less than 9' in width shall use a maximum of two wood posts.

In the case of hitting rock when driving posts
1. Shift the sign location. Do not violate minimum sign spacing.
2. With the engineer's approval, use acceptable alternative sign stands.



KI-104a

Sign Number	GIVE EM A BRAKE
Width x Height	4'-0" x 4'-0"
Border Width	1.0"
Corner Radius	4.0"
Stripe Width	3.0"
Mounting	Ground
Background	Type: Non-Reflective
	Color: Black
Legend/Border	Type: Reflective
	Color: White
Legend Font	Dutch 801 Roman SWC 25 Degree Slant
Stripes	Type: Reflective
	Color: Orange



KI-105a

Sign Number	FINES DOUBLE
Width x Height	4'-0" x 3'-0"
Border Width	0.9"
Corner Radius	3.0"
Mounting	Ground
Background	Type: Reflective
	Color: White
Legend/Border	Type: Non-Reflective
	Color: Black

Dimensions in inches — Spacings are to start of next letter

Y FONT	LETTER SPACINGS															HT LEN
23.0 D	X	F	I	N	E	S	X									8.0
	9.7	6.4	3.2	7.3	6.4	5.4	9.7									28.6
11.0 D	X	D	O	U	B	L	E	X								8.0
	3.9	6.9	7.5	7.3	7.3	6.4	4.9	3.9								40.3
4.0 D	X	I	N	X	W	O	R	K	X	Z	O	N	E	S	X	4.0
	3.1	1.6	2.7	3.2	4.3	3.8	3.6	2.8	3.2	3.4	3.8	3.6	3.2	2.7	3.1	41.8

Notes:

Typically, there are two sets of informational signs installed per project: one for each direction of traffic.

Install signs a minimum of 500' in advance of the road work ahead sign. The engineer may designate a more appropriate location if conditions dictate.

The informational signs are not to interfere with the traffic control signs for the project.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
SIGN INFORMATION

TE710

FHWA APPROVAL		06/01/15	APP'D	Kristina Pyle	
DESIGNED	R.W.B.	DETAILED	R.W.B.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

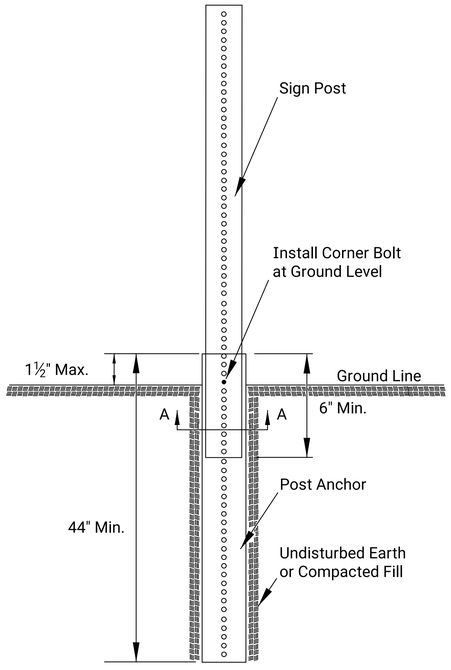
KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

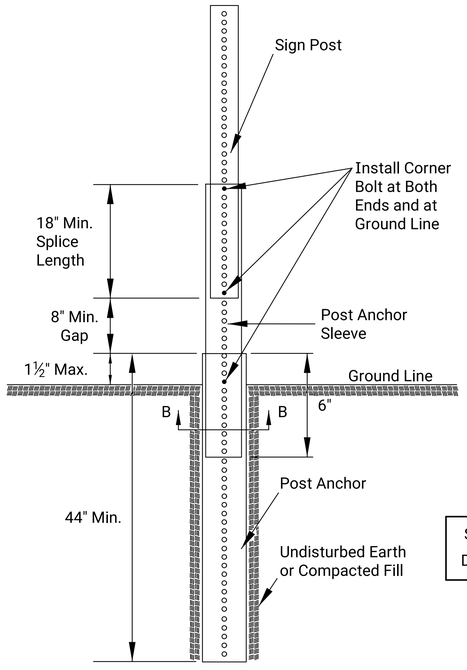
Plotted : 29-MAR-2018 12:40
Traffic
Drawn By : mushock
File : te710.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	47	52

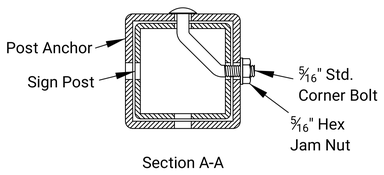
PERFORATED SQUARE STEEL TUBE (P.S.S.T.) POST SETUP



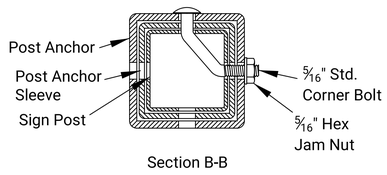
P.S.S.T. Detail



Telescoping P.S.S.T. Detail



Section A-A

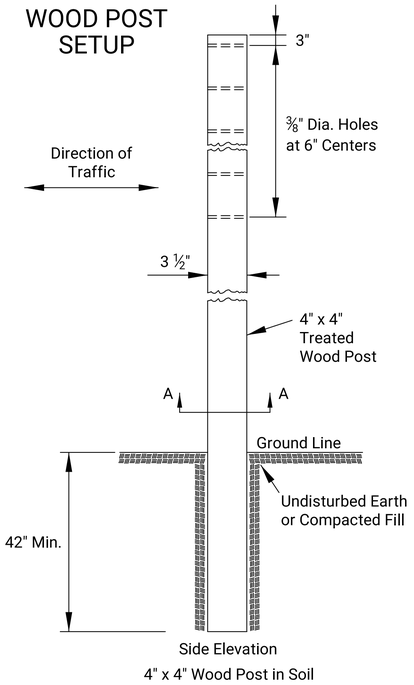


Section B-B

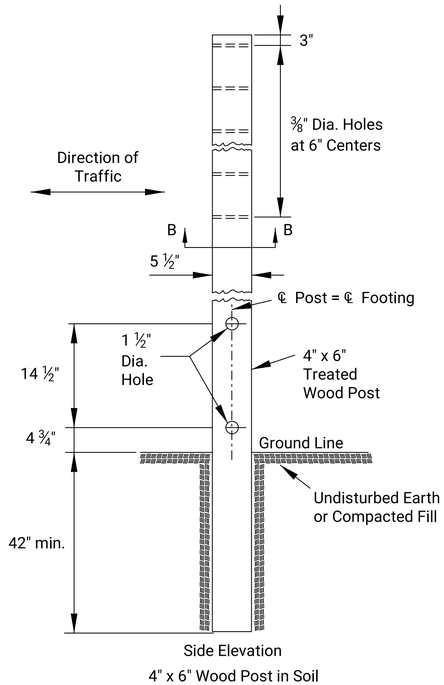
Details for 2", 2 ¼", or 2 ½" sign posts

Place bolts in the same corner along each sign post.

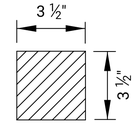
WOOD POST SETUP



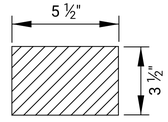
Side Elevation
4" x 4" Wood Post in Soil



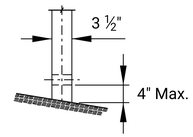
Side Elevation
4" x 6" Wood Post in Soil



Section A-A



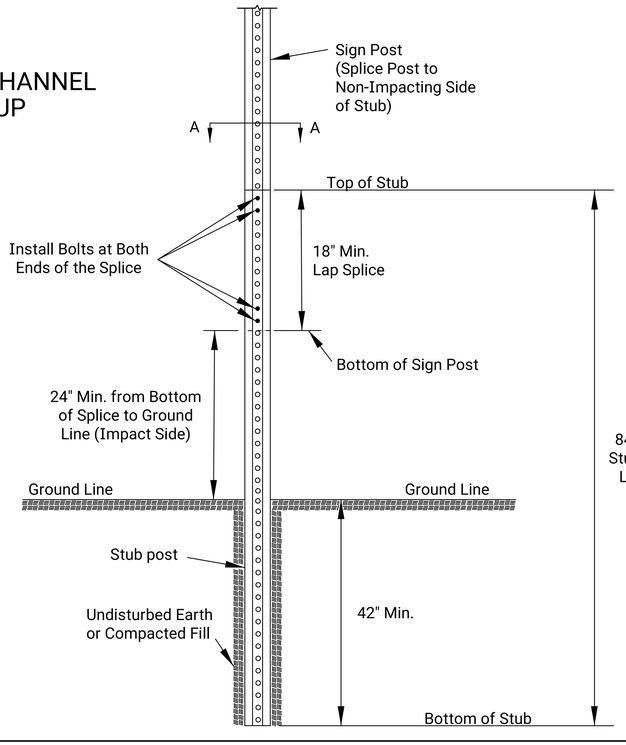
Section B-B



Front Elevation

See TE710 for Additional Details and Requirements

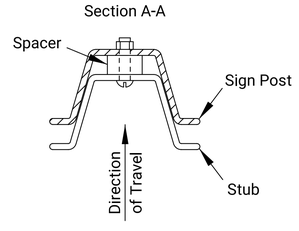
3 LB/F U-CHANNEL SETUP



Notes:

Place two bolts at both ends of the splice through the holes nearest the ends of the splice.

Use manufacturer recommended spacers over the bolts between the spliced pieces of U-Channel.



NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SIGN POSTS

TE712

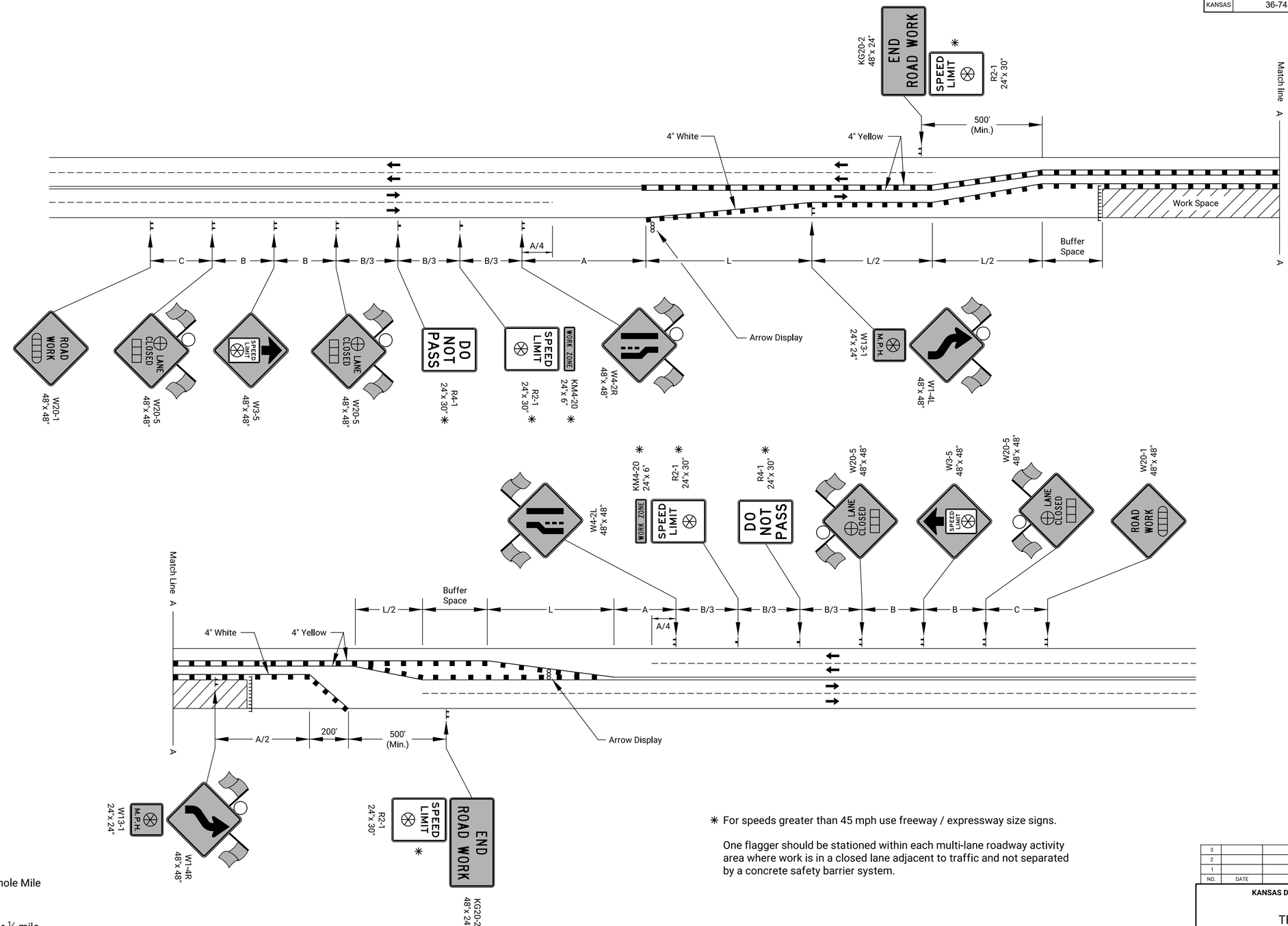
FHWA APPROVAL			06/01/15	APP'D	Kristina Pyle		
DESIGNED	B.A.H.	DETAILED	R.W.B.	QUANTITIES		TRACED	
DESIGN CK.		DETAIL CK.		QUAN. CK.		TRACE CK.	

KDOT Graphics Certified 03-29-2018

Plotted : 29-MAR-2018 12:40
Traffic
Drawn By : mushock
File : te712.dgn

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	48	52



✳ For speeds greater than 45 mph use freeway / expressway size signs.

One flagger should be stationed within each multi-lane roadway activity area where work is in a closed lane adjacent to traffic and not separated by a concrete safety barrier system.

- Type 3 Barricades
- X Length to the Nearest Whole Mile
- ■ Channelizing Device
- Ahead, 1500 ft, or 1 mile
- Ahead, 1000 ft, 1500 ft, or ½ mile
- Right or Left
- Speed to be determined by the Engineer
- ○ Type "A" Low Intensity Warning Light

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
CROSSOVER ON UNDIVIDED ROADWAY

TE748

FHWA APPROVAL		06/01/15	APP'D	Kristina Ericksen	
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 03-29-2018

Drawn By : mushock
File : te748.dgn

Plotted : 29-MAR-2018 12:40
Traffic

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	49	52

SUMMARY OF TRAFFIC CONTROL DEVICES (EACH)

Work Zone Sign (Special)		
Sign No.	16.25 Sq.Ft. & Less	16.26 Sq.Ft. & Over

SUMMARY OF TRAFFIC CONTROL DEVICES (EACH PER DAY)

✳ Quantity most used on the project at any one time

BASE			
Work Zone Signs ✳			
Sign No.	Size - Sq.Ft.		
	0-9.25	9.26-16.25	16.26 & Over
W20-7		2	
KG20-2	11		
KM4-20	2		
R2-1	4		
R4-1	2		
R9-11L	1		
R9-11R	1		
R9-9	14		
R11-2		3	
R11-4		3	
W1-4L		1	
W1-4R		2	
W3-5		2	
W4-2R		2	
W13-1	3		
W20-1		11	
W20-5		4	

Barricades ✳		Channelizing Devices ✳		
Type 3 (4' to 12')	Pedestrian	Fixed	Portable	Pedestrian
83	10	58	111	

Lighted Devices ✳	
Work Zone Warning Light (Type "A" Low Intensity)	80
Work Zone Warning Light (Red Type "B" High Intensity)	
Arrow Display	2
Portable Changeable Message Sign	

BASE		
Recapitulation of Quantities		
Item	Quantity	Unit
Work Zone Signs (0 to 9.25 Sq.Ft.)	4,900	Each Per Day
Work Zone Signs (9.26 to 16.25 Sq.Ft.)	2,940	Each Per Day
Work Zone Signs (16.26 Sq.Ft. & Over)		Each Per Day
Work Zone Barricades (Type 3 - 4' to 12')	11,620	Each Per Day
Work Zone Barricades (Pedestrian)	1,400	Each Per Day
Channelizer (Fixed)	8,120	Each Per Day
Channelizer (Portable)	15,540	Each Per Day
Channelizer (Pedestrian)		Each Per Day
Work Zone Warning Light (Type "A" Low Intensity)	11,200	Each Per Day
Work Zone Warning Light (Red Type "B" High Intensity)		Each Per Day
Arrow Display	280	Each Per Day
Portable Changeable Message Sign		Each Per Day
Pavement Marking (Temporary)		
4" Solid (Type I)	86	Sta./Line
4" Solid (Type II)	31	Sta./Line
4" Broken (8.0') (Type I)		Sta./Line
4" Broken (8.0') (Type II)		Sta./Line
4" Broken (3.0') (Type I)		Sta./Line
4" Broken (3.0') (Type II)		Sta./Line
4" Dotted Extension (Type I)		Sta./Line
4" Dotted Extension (Type II)		Sta./Line
Solid (Line Masking Tape)		Sta./Line
Broken (Line Masking Tape)		Sta./Line
Symbol (Type I)		Each
Symbol (Type II)		Each
Flexible Raised Pavement Marker (4" Broken (8.0'))		Sta./Line
Flexible Raised Pavement Marker (4" Broken (3.0'))		Sta./Line
Pavement Marking Removal	3,198	Lin. Ft.
Work Zone Sign (Special) (16.25 Sq. Ft. & Less)		Each
Work Zone Sign (Special) (16.26 Sq. Ft. & More)		Each
Rigid Raised Pavement Marker (Type I)		Each
Rigid Raised Pavement Marker (Type II)		Each
Traffic Signal Installation (Temporary)		Lump Sum
Traffic Control (Initial Set Up)	Lump Sum	Lump Sum
Traffic Control		Lump Sum
Flagger (Set Price)	1	Hour

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
SUMMARY OF DEVICES
RECAPITULATION OF QUANTITIES

TE795

FHWA APPROVAL		06/01/15	APP'D Kristina Ericksen	
DESIGNED B.A.H.	DETAILED R.W.B.		QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

Plotted :29-MAR-2018 12:40
Traffic

Drawn By : mushock
File : te795.dgn

STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	50	52

PG: 1937.21
1.46% 2.00% 2.00% 2.72%
Cut = 93 S.F.
Fill = 0 S.F.
56+50

PG: 1937.88
4.79% 2.52% 2.00% 2.00% 3.97% 5.35%
Cut = 345 S.F.
Fill = 0 S.F.
56+02.57

PG: 1937.91
4.63% 2.53% 2.00% 2.00% 4.01% 5.13%
Cut = 345 S.F.
Fill = 0 S.F.
56+00

PG: 1938.44
1.90% 2.00% 2.00% 4.51%
Cut = 96 S.F.
Fill = 0 S.F.
55+50

PG: 1939.28
3.65% 2.00% 2.00% 6.22%
Cut = 87 S.F.
Fill = 0 S.F.
55+00

H=2
V=2

PG: 1933.68
3.63% 2.00% 2.00% 2.69%
Cut = 67 S.F.
Fill = 0 S.F.
58+50

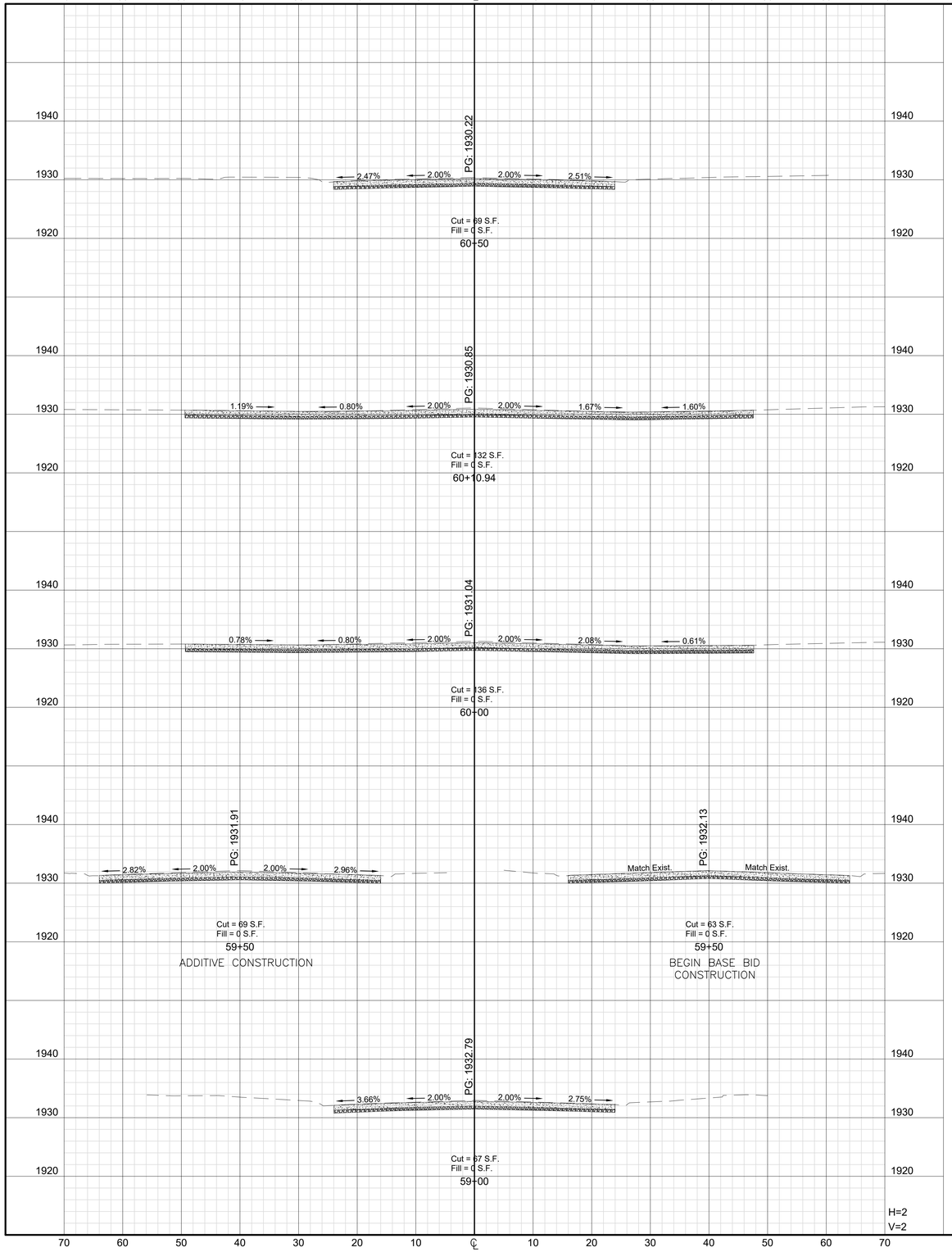
PG: 1934.57
2.68% 2.00% 2.00% 3.24%
Cut = 69 S.F.
Fill = 0 S.F.
58+00

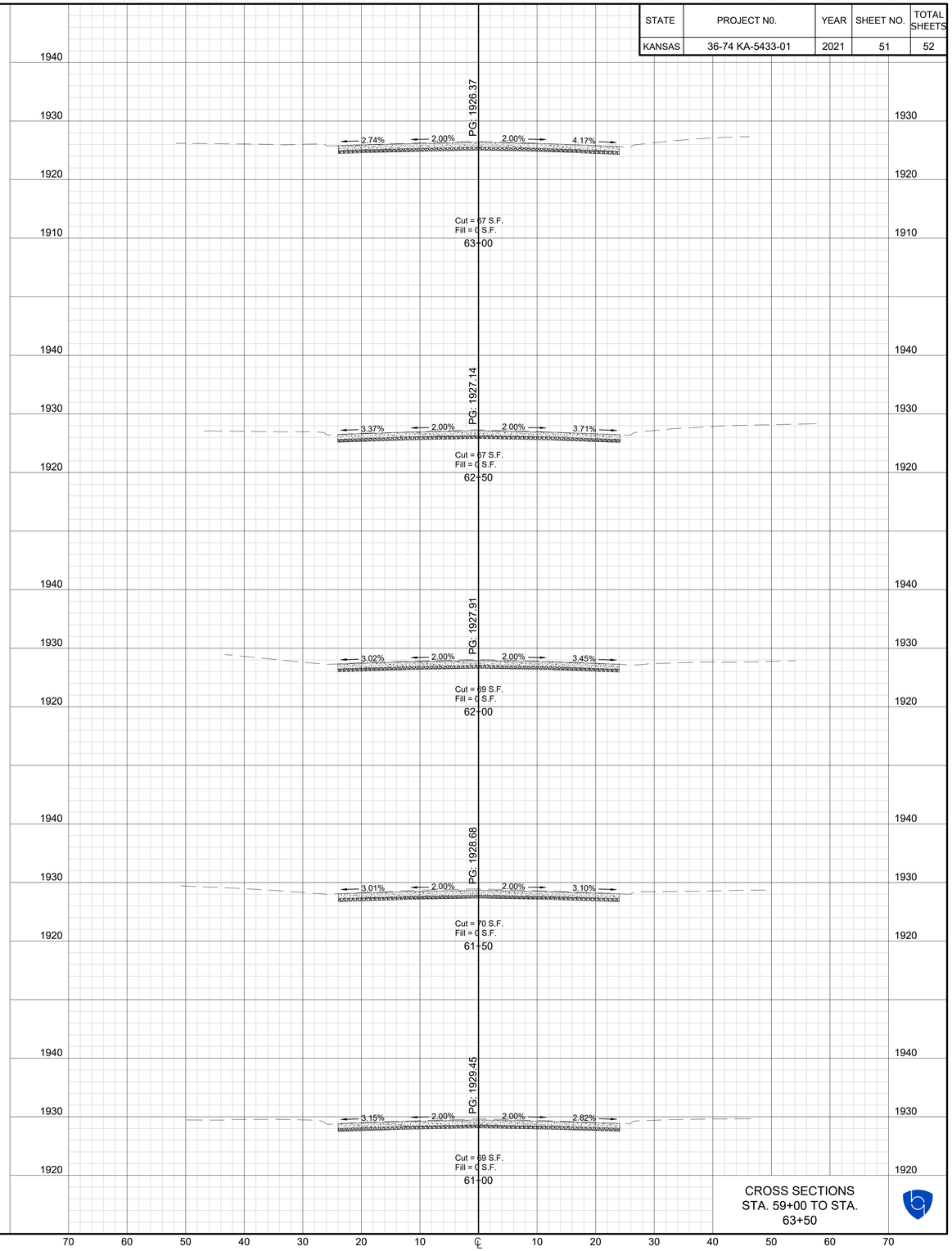
PG: 1935.46
2.84% 2.00% 2.00% 2.91%
Cut = 68 S.F.
Fill = 0 S.F.
57+50

PG: 1936.35
3.40% 2.00% 2.00% 3.11%
Cut = 70 S.F.
Fill = 0 S.F.
57+00

CROSS SECTIONS
STA. 55+00 TO STA. 59+00

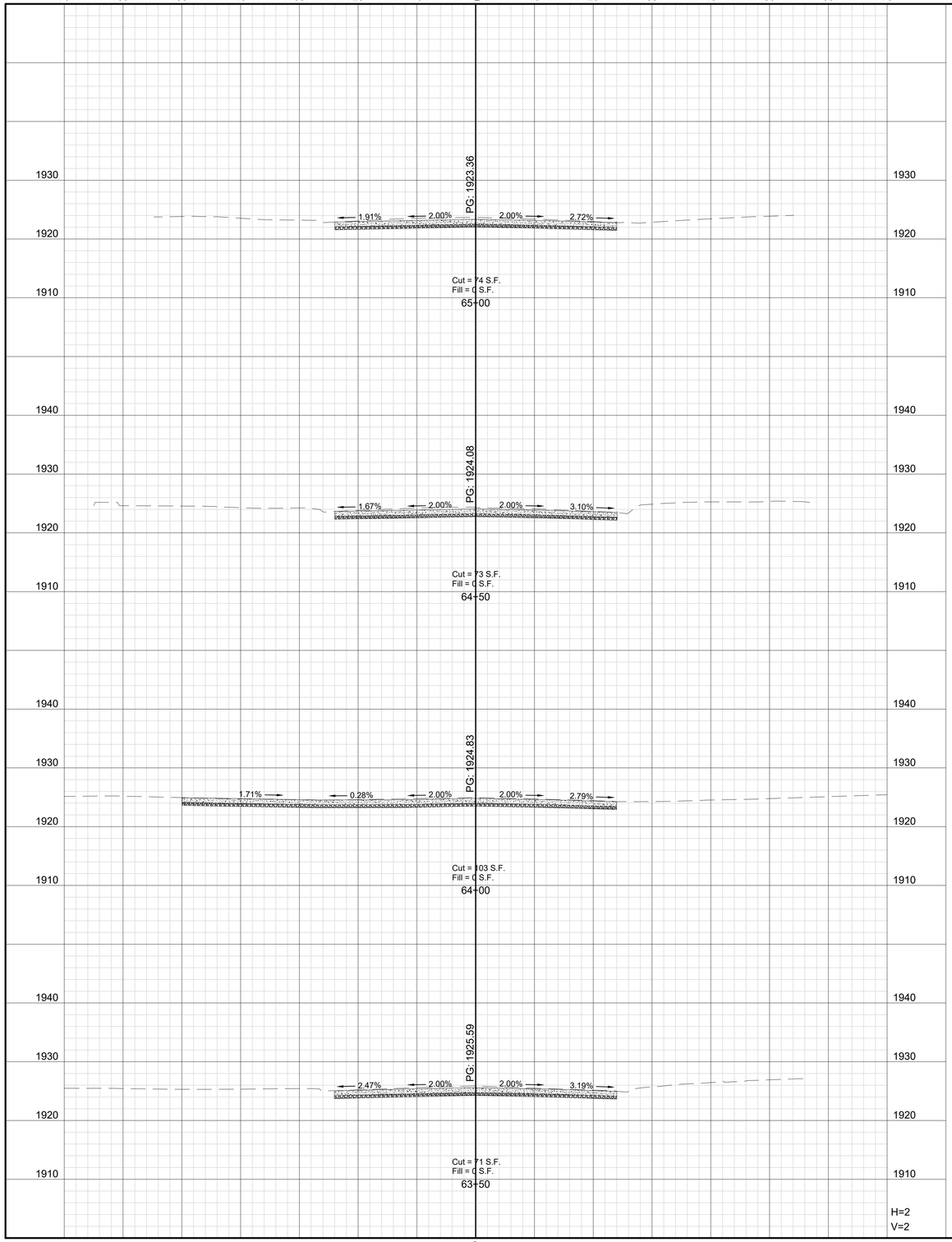
STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	51	52

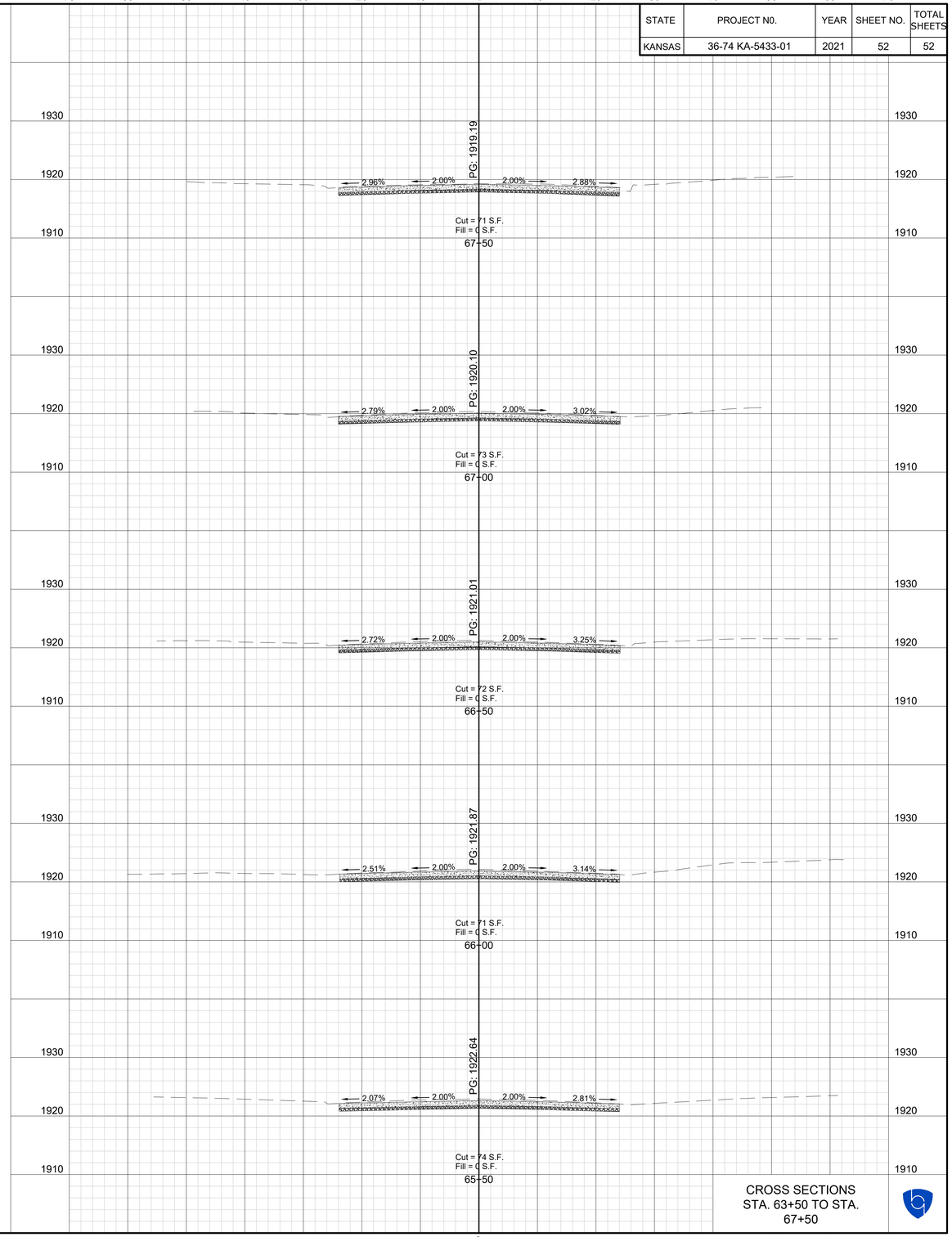




CROSS SECTIONS
STA. 59+00 TO STA. 63+50

STATE	PROJECT N0.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	36-74 KA-5433-01	2021	52	52





CROSS SECTIONS
STA. 63+50 TO STA. 67+50